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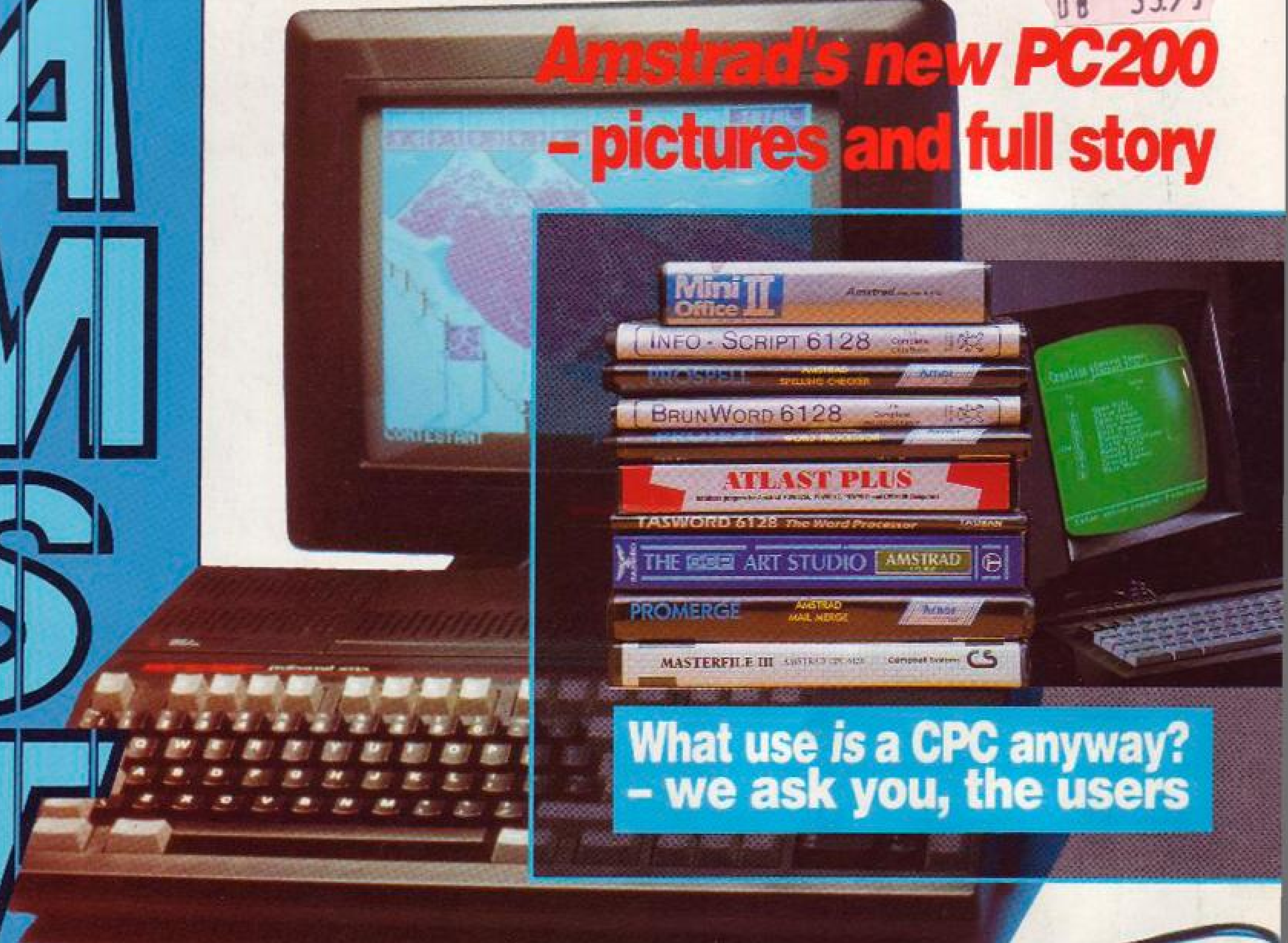
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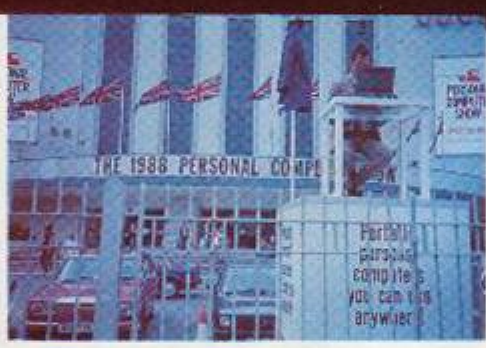
AMSTRAD ACTION

THE MOULD-BREAKING MAGAZINE FROM FUTURE PUBLISHING

Amstrad's new PC200 - pictures and full story

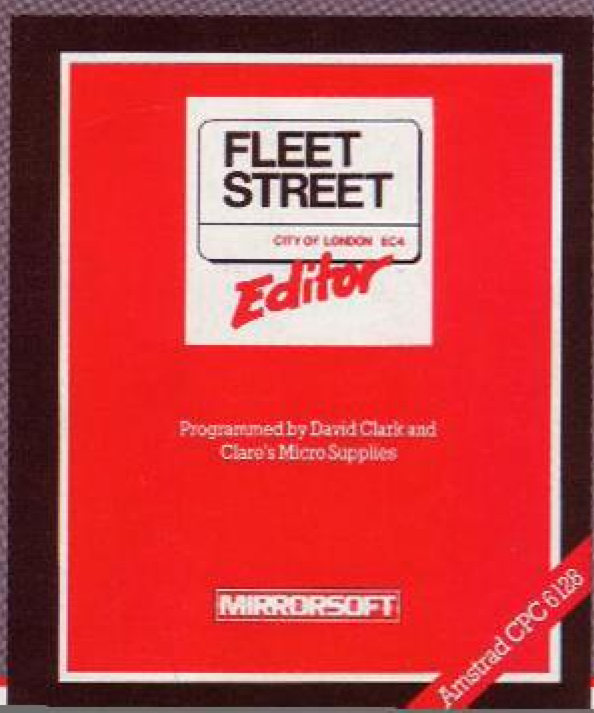


What use *is* a CPC anyway? - we ask you, the users



PC Show - special report

AT LAST - FLEET STREET EDITOR! We rate it against the rest



On test:
Roadblasters, The Train Vindicator, Game Over II Ingrid's Back, Lancelot and more. Much more!

Plus:
Hardware projects, Type-ins, Cheat Mode, Absolute Beginners, Bar CPM, The Look, First Bytes, Buyers Guide, Problem Attic...



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Video-Game
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After abandoning the ship you capture an ADREC in order to continue advancing on the planet. A dagger is the sole weapon you rely on to fend off the inhabitants. You fight against the enemy troops. You have to steal a weapon. And advance forward, straight ahead. Nothing can detain you.
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You cross swamps, mountains and forests... there are enemies all over. The way to the prison becomes more hazardous the further you advance. You take command of a helicopter, descend into the entrails of the planet, and arrive at the prison. It is heavily guarded. Will you be capable of freeing ARKOS?.
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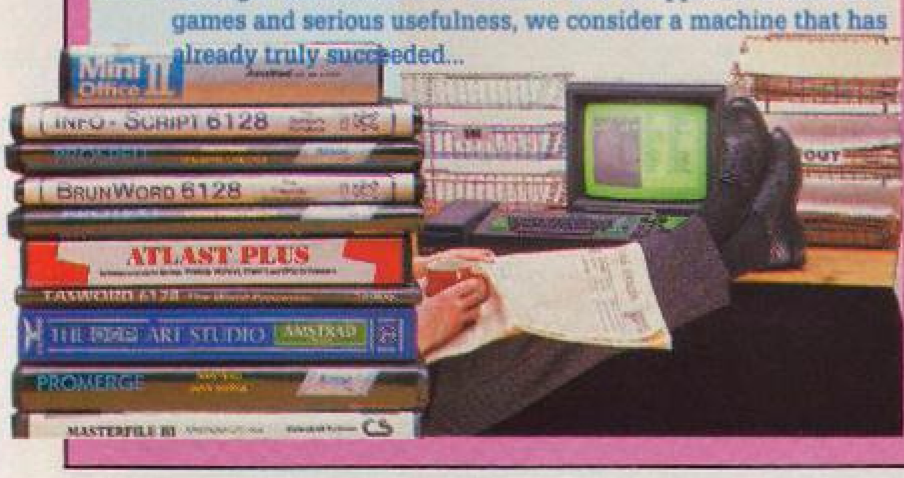
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No business like show business...

So that was the 1988 *PC Show*. We've a special report in *Amscene*, with photos and details of the most important new games releases coming up for the Christmas rush.

And then there was Amstrad's new machine – 'The Sinclair Professional Series PC200' (bit of a mouthful, huh?). You'll find the details inside, but in short it's a low-cost PC compatible that's going to be sold (or not, as the case may be) on the claim that, 'It's *both* a games machine *and* a serious machine'.

Ring a bell? Yes of course it does! It's the CPC story, all over again. The image we're to form in our supposedly gullible minds is of the computer that gets its joystick waggled all day and its keypad bashed all night, as junior gives way to parent home from a busy day at the office.

But hang on a minute: is it really a games machine? Four colours? Hopelessly inadequate sound? It seems to us that anyone who's serious about games knows already that the low end of the PC range isn't the place to go for a good waggle.

So the verdict on Sugar's latest enterprise must remain, at least for the time being, 'Not proven'.

Steve

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PC Show 88 special – including the new PC200!

Amstrad launch new range

Amstrad have launched a new range of 'games/business' machines, the 'Sinclair Professional series PC200'.

The news came at a press conference immediately prior to the PC Show, held at Earls Court last month. The Show was the press and the public's first opportunity to see the range in the plastic, as it were. (A piece had already broken off the model your correspondent saw on the morning of the first day of the show – before the public had even been admitted!)

The selling pitch is that 'it gives you the best of both worlds – IBM-PC compatibility unlike any other home computer and an edge for games you won't find on any other PC, thanks to the built-in colour TV interface'. The generally low-key announcement of the machine at the Amstrad press conference, however, and its lukewarm reception by the gathered pundits and industry commentators, suggests that it is not the world-beater Amstrad must have been aiming for. And the launch of the machine as a Sinclair may further weaken its impact, for the title – bought lock, stock and barrel from Sir Clive – stills conjures images of the wretched C5 and the like.

Spec/tackle

For the technically minded, here's what you get:

- **512K RAM**
- **CGA graphics,**
- **built-in modulator for use with TV,**
- **AT type keyboard,**
- **single 3.5 inch disk drive,**
- **expansion socket for 5.25 inch or 3.5 inch floppy disk drive,**
- **joystick port.**

The machine comes with a mouse, Microsoft MS-DOS (a disk operating system very similar to, but not compatible with, CP/M), GWBASIC, GEM-3 (a disk handling suite) and GEMPaint (a graphics drawing system).

PC200 price list

without monitor	£343
with mono monitor	£458
with colour monitor	£573

– all three prices include VAT



● The 'Sinclair Professional PC200'. Jack of all trades, certainly – but master of none?

The Amstrad sales pitch attempts to present the PC200 as both a games machine and a serious machine (now where have we heard *that* before?). First impressions, however, are of something that is neither. Its four colours and poor sound *('beep')* are what prevented the PC from ever being a world-beating games machine, while its decidedly modest processing power will not appeal to many business users out shopping for a 'serious' computer.

On the other hand, there is a huge library of PC software – the biggest of any machine ever – and the 3.5 disk format is set fair to become the industry standard for both games and serious software. And since it's often the breadwinner of the household who actually forks out the readies for a computer, a machine that can run PC software may be attractive.

One of the cleverest features of the PC200 is its expandability. The lack of expansion slots on the Amstrad PPC – a 'portable' ('luggable' would be more accurate) PC – have seriously hampered its success, and Amstrad have avoided repeating that mistake. The new machine features two easily accessible PC-standard slots for such things as a 20Mb hard card and 64 colour Enhanced Graphics Adaptor. (The only problem is that fitting full-length cards prevents you from closing the 'door'!)

The machine is expected to be available immediately – exclusively through Comet. It is believed this is the first time Amstrad has gone in for such a peculiar arrangement, and may be an indication that this is principally a Christmas machine. How it does after that is anyone's guess.

So the big question, of course, is: where does this leave the CPC? Superficially the machine looks to be the successor to both the 6128 and the PC compatible 1512, but since Sugar has already indicated that he has no intentions of dropping the latter it can be assumed he feels the same way towards the CPC. 'So long as people buy it', he has said, 'I'll sell it'.

One industry commentator who has seen it all before described the 200 as 'a turkey', and added wryly: 'Perhaps it'll sell at Christmas, then'.

New CPC launch

The announcement was made at the PC Show of the 'Amstrad Entertainment Centre'. The package, as predicted in *AA36*, consists of either 464 or 6128, colour monitor and TV tuner, clock radio, joystick, 17 games (*Monopoly, Scalextric, Cluedo, Trivial Pursuit* and *Scrabble* appear to be the pick of the bunch) and 'work station'. Billed as the 'ideal Christmas present' – unless you've already got a CPC, which you have – it's expected to retail at £399, a saving, in a roundabout way, of £50. Whether the individual items – modulator, clock radio and 'work station' – will be available separately had not at time of writing been revealed.





PC Show '88

The 1988 Personal Computer Show, held for the first time at vast Earls Court, attracted huge crowds, most of them apparently having sharpened their elbows and bought toe-crushing boots especially for the occasion.

Some statistics: display space: 12,000 square metres (that's 50% bigger than last year); attendance, about 100,000 (up on last year's 73,000). Each visitor is believed, on average, to have acquired 79 pieces of paper, 64 plastic carrier bags and eight bruises of varying degrees of intensity.



It was, shall we say, a little busy on Friday, Saturday and Sunday the 16th-18th September. The tube disgorged crowds at approximately two minute intervals, and the harrassed security staff shouted themselves hoarse just trying to herd people towards the appropriate doors, and away from the despairing clutch of the 'Junior Fashion Show'. It is estimated that 3,500 fashion-conscious teenagers found themselves playing *Savage* rather than finding out about the latest in partywear. What happened to the computer buffs who ended up in the wrong exhibition is, alas, not known...

Display of wealth

Once inside, people were bombarded with a barrage of light and sound from the increasingly over-the-top games stands. Microprose had their multipassenger simulator Super X in operation, and the queues never subsided. (The trip, by the way, was good – but not *that* good. The screen itself, onto which was projected film of hang-gliding, motor-cycling, big dipping and aeroplane flying, was of surprisingly poor quality, though the bounciness of the journey partially made up for it.)

There were the usual enormous displays of wealth from the likes of US Gold, Mirrorsoft, Telecomsoft, Pepsi Cola *(Pepsi Cola?)*, and the rest.

However it was Domark, whose appearance at the Show was apparently a late decision, who coolly upstaged everyone with a double-decker bus driven by a grotesquely over-inflated Rambo, complete with knots of blue veins and a bust that would put most of the girls on the US Gold stand to shame. Even better, they had a personal appearance from Her Majesty Dame Mrs Margaret Hilda Thatcher Herself, whose quiet understatement and gentle encouragement was a lesson to us all.



Absent friends

Electronic Arts and Mediagenic, however, chose not to grace the Show with their public presence at all, and there were mutterings in various quarters that the whole thing was getting 'too big for its boots'. The business/serious – games/leisure split was as marked as ever, and it seems likely that the two must eventually go their separate ways.

As far as Amstrad was concerned this was a high-profile show, with launches of big new business machines and the PC200 *(see elsewhere in*



Amscene). Their stand was fun to watch, as dozens of puzzled punters tapped a few keys on the PC200 and wondered what a Sinclair machine was doing on the Amstrad stand (Amstrad bought Sir Clive out a couple of years ago). Reaction ranged from 'Looks like an Atari, pity about the screen', to 'Why the fuss?' and even, from one world-weary youngster, 'Sugar's flipped. It'll never sell'. Others, however, were more generous, and could be seen shrewdly calculating Christmas present estimates.

And of course *Amstrad Action* was there in force, signing autographs, posing for photographs and fighting off the screaming hordes *(after blood – ed)*. We enjoyed meeting so many readers, and perhaps even helping one or two of you. Thanks for all the suggestions, though one or two of them would seem to be physically impossible. If your idea is incorporated into the mag before too long, thanks!

Future Publishing also took the opportunity to promote the latest addition to its stable, *New Computer Express*. Reaction to the free 'dummy' was encouraging: look out for *NCE* at a shop near you! *(That's enough free ads – ed.)*



Level 9 bury £5,000!

The quest is back on for the Holy Grail, it was revealed at the Show. Yes, like you we thought all that business had been sorted out long ago – but apparently not.

The search for the £5,000 replica of the mug that gave Arthur and the boys such a hard time back in The Old Days is a publicity stunt – and a good one at that – to publicise the release of *Lancelot*, Level 9's adventure game out now on the Mandarin label. The item in question is seven inches tall, hand crafted from solid sterling silver and gilded inside with 22 carat gold and encrusted with amethysts, garnets and opals. And instead of nipping round to the nearest jewellers to cash in, 'Sir' Pete Austin and the other Level 9'ers have BURIED IT!

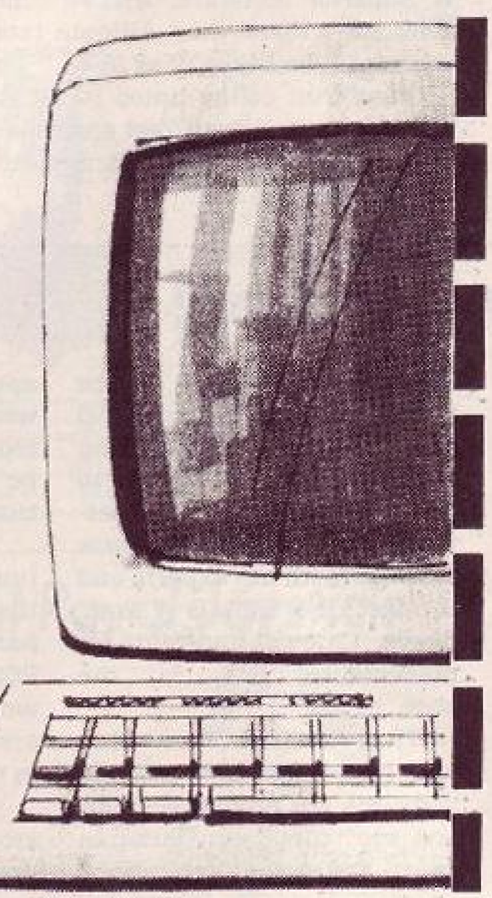
Four preliminary clues, available on a special telephone hotline, reveal 'possible (but not actual) locations for the hidden treasure'. What use a 'possible (but not actual)' location is to anyone, we hear you ask? Well, the first 36 contestants to guess these locations correctly are to receive a second set of clues which will ultimately lead to the Grail's true place of rest.

● We feature a full review of *Lancelot* in this month's packed *Pilgrim*, which also reviews Level 9's other big release of the moment, *Ingrid's Back*.



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Yours sincerely,

Alan Sugar
Chairman AMSTRAD Plc



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Bits & CPC's

● Microlink, the electronic mail system people, have announced that its subscribers can now communicate directly with the world's fax users – 200,000 of them in the UK alone.

● Electronic Arts have clinched deals to distribute for both the French Ubi Soft, of *Asphalt* fame, and the Spanish Dinamic, of *Game Over* and *Army Moves* renown (*Game Over II* is reviewed in this month's *Action Test*).

● Good luck to new venture 'Software Circus', which claims to be Britain's 'first speciality store selling only computer software' and which opened at the end of September in Oxford St. Over 500 titles are available.

● A Mr William Bailey has had the clever idea of establishing The Adventure Writer's Companion. The idea is to offer hints, advice and critical reviews to those people who've written adventures – whether GAC'ed, PAW'ed or in their own language. Reviews could be published in a newsletter and the word spread that a good adventure was available. Interested? Write (no adventures yet!) to: William Bailey (TAWC), 4 Worcester Rd, Hatfield, Herts AL10 0DX.

Hackers to be outlawed?

Legal moves are afoot to make computer hacking a crime.

At present you're not breaking the law if you bust into someone's computer security unless you actually commit damage such as fraud or sabotage.

The plan – and at the moment it's no more than that – is revealed in a paper for discussion published by the Law Commission, and would bring Britain into line with the United States, Canada, Sweden and France, where hacking is already specifically outlawed.

● Superior Software, who've concentrated until now on the BBC, have taken over Alligata ('software with bite' – geddit?), who did *Who Dares Wins II*.

First fruit of the union is *By Fair Means or Foul*, reviewed this month in *Action Test* and notable for allowing you to cheat with head butts, groin punches and kicks – so long as the referee doesn't catch you!

The Show goes on!

Recovered from the PC Show yet? Good, because you're just in time for the next one!

The Amstrad Computer Show returns to Manchester – to be precise, the G-Mex Centre, on October 21-23. Michael Meakin, head of the Database Exhibitions, which is organising the show, claims that with all the new features and the 70 companies exhibiting, 'This will be the most exciting computer show ever held in Manchester'. Exhibitors include Arnor, Brunning Software, Database Publications, Goldmark and HSV, among many others. Siren Software will have *Micro-Design Extra*, 350K's of extra fonts and clip art costing £12.99. They'll also have a range of 3.5 inch CPC disk drives, offering 800K capacity per disk at £124.99.

Gimmicks promised include 'Amstrad Street', as well as the 'Amstrad Arms' and the 'Amstrad Office' (the possibilities are endless). Of more interest to CPC users may be the 'Amstrad Advice Stand', manned (personned?) by specialists – including CPC boffins. There is also to be a 100-seat theatre, the setting for Question and Answer sessions with top experts and a 'Meet the Editors Forum' (Steve Carey's invitation is presumably still in the post...).

The Amstrad User Club will be on hand, and some surprises are promised: 'Wait and see', threatens Christine Lees, Database Exhibitions operations director: 'We don't want to give too much away too soon' – a remark that can be interpreted in more ways than one...

The Show is also an opportunity for those who missed the Earl's Court bash to get hands-on experience of the PC200, and should prove a worthwhile expedition if you are thinking of splashing out in the near future.

After all, Christmas is just around the corner *(what an appalling thought...)!*

Games news

As ever, the PC Show provided the ideal opportunity for a whole host of releases, previews, demo's and promises (these last to be taken with a substantial dose of salt!). Here's just some of what's coming soon...

● Activision have just signed a three year worldwide deal for software rights to Games Workshop – well known for their roleplaying and board games. First fruits are *Warhammer Fantasy Batlle* and *Warhammer 40,000*. Magic and monsters feature heavily in the *Warhammer Fantasy Battle* and the far future is the setting for *Warhammer 40K*.

● All three divisions of Telecomsoft have something heading your way in the coming months. Firebird are to release *Savage*, which stars a homicidal axe wielding maniac on a quest to save his friends from a dank and gloomy dungeon. Monsters must be bashed and objects collected as you run around the dungeon. It's due out November 2nd at £9.99 and £14.99 on tape and disk respectively.



Rainbird's contribution, *Fish!* is an adventure from Magnetic Scrolls, the people who brought you *The Pawn* and *Guild of Thieves*. You play the part of a goldfish (yes, honestly) out to save the world. It'll have the usual excellent graphics and will set you back £19.99 (disk only). No release date has been fixed yet.

A quintet of games from the Silverbird budget label are also heading your way: *Skateboard Joust*, *Hopper Copper*, *Classic Dogfight*, *Scuba Kidz* and *Turbo Boat Simulator*. All cost £1.99 on tape.

● A fast moving 3D shoot-'em-up with highly detailed graphics is being converted to the CPC. *Afterburner* is the arcade game in question and it's gonna take some doing to get it running fast enough on a home computer: a 3 Meg. arcade game is getting sqeezed into 64K pot! The release date is set for January.

● *SDI* should be on the streets by the time you read this. Nuclear war has begun and you have to stop the destructive missiles landing on your poor defenceless population.

R-type is another arcade action scrolling shoot-'em-up due very soon. Loads of different weapons can be strapped onto your ship as you zoom around killing everything in sight.

Finally there's *Time Scanner*, a pinball variant to keep you hitting the flippers. There are four stages to go through, each linked by a time tunnel. To gain entry to the tunnel you need some sharp pinball skills. January is when it's due. All four games cost £9.99 on tape and £14.99 on disk.

STOP PRESS! If you're having trouble with last month's cassette turn to page 33 for help!

REACTION

Your letters, gratuitously headlined in tabloid style

Cassette scandal

As you can see, I'm returning the (almost) free cover cassette from *AA37* as *Dizzy* totally fails to load.

Apart from duff 'free' gifts I think *AA* is excellent – I get it every month and read it from cover to cover. Keep up the good work!

Peter Nunn,
Welshpool

We are very sorry indeed to hear your cassette won't load, Peter, and we will of course send you a replacement pronto. We've had a few similar complaints, and if yours was one of them we extend the same sincere apology and promise to replace your tape.

What can we say? We issued almost 50,000 tapes and if even one in a thousand fails, that still means disappointment for 50 of you. ***Turn to page 33 and Problem Attic for more details.***

AA foul language protest

I enjoyed your 'Whizzkids' article but please, in future can you please leave out some words readers of roughly seven will not wish to read.

Martin Biggs (11)
Poole

Interesting point. So you want us to falsify our quotations so they won't give offence? Surely when there is unpleasant violence and sexism in so many computer games, the odd only very slightly naughty word in the context of a lengthy and serious interview is not going to turn any seven year old off? Besides, I don't know many seven year olds who don't wish to see such words – generally it's their worried parents and teachers who try to protect them. But we take your point, and generally take great care with what goes into the mag – hands up those who said it sometimes doesn't look like it!

●Computer games 'violence' horror

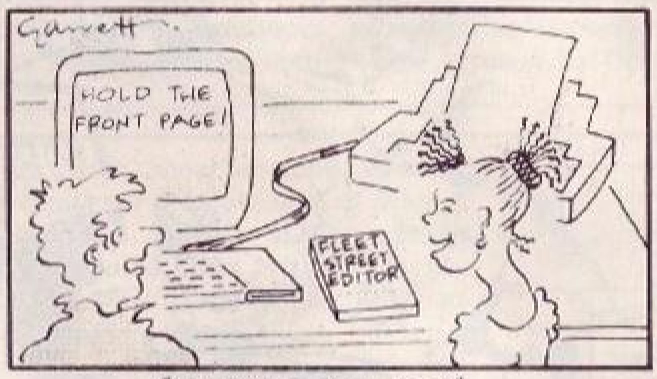
Last year you published in booklet form a collection of pokes, maps and tips which had appeared in your magazine during 1986/87. It proved a constant source of inspiration and an essential lifeline to my children and me at times when we would have otherwise given up trying to persevere with games because of intense frustration brought about by apparently inadequate dexterity and reduced mental capacity (probably exaceberated by rage at being constantly thwarted at the last as victory seemed to be within our grasp).

Your publication therefore not only saved the family's sanity, but also helped to greatly enhance the pleasure and satisfaction we gained for our money; it was also instrumental in preventing me from putting a fist through the monitor's screen in particularly stressful moments.

You will therefore not be surprised to hear that I have been looking forward to your publishing this year's edition, and understand my disappointment that, as yet, there has been no mention of its impending appearance. Was last year's booklet a once only offering or will you be making it an annual feature?

I. Ellison
Gloucester

At present we have no plans to do another Cheat Mode *booklet, but if there was sufficient interest we might change our minds...*



"NOW WHAT DO I DO?"

Commentator threat

If anyone out there is getting bored of *Matchday II* (because they always win by miles, and they get thrashed when they put the skill level up), here's the solution: commentate! I give my players names, like Stavros (centre forward) Loadsamoney (Winger) Harry Enfield (winger) and Buggerallmoney (midfield). You can really go over the top with commentating, or just go... 'Yop! yop! yooopppl' like David Coleman. I am brilliant.

Luke Storkey (11)

That's ehhr, remarkable! Actually I find Matchday II *is fine as it is, but I've tried your solution, Luke, and it really does work. My favourite was the snooker commentator who said, 'And for those of you watching in black and white, the blue is the one behind the red...'*

Does anyone else do anything to improves thing during a game (that we can print)?

Loads of terror

Help! the other day I bought *Druid II*. I rushed home to play it, but to my disappointment it did not work properly. I loaded the other side but the same thing happened, so the next day I took it back and they kindly changed it for me. When I got home I loaded it straight away. It still didn't work and neither did the other side so the next day I took it back again. This time they loaded my tape on one of their Amstrads. It worked first time. They gave it back to me and told me to try it again, but it still wouldn't load on my computer. I tried it without any added peripherals, that included the joystick, but still no luck. The plot thickens, because I own a 464 and that was the model in the shop. My tape deck is clean, especially the heads and wheels, I cleaned them only a few weeks ago. I have well over a hundred titles all originals and they all work perfectly. So something is definitely wrong and I just hope it isn't my computer. Please print my letter as I'm sure I can't be the only one with this kind of problem.



"BIT SENSITIVE, THAT TUTOR..."

David Durrant
Peterborough

If Druid II does work in the shop, but not at home then your machine is to blame. The tape heads are probably out of alignment and need adjusting.

'Fish out of water' probe

For nearly two years I have been trying to purchase a copy of *Jack Charlton's Match Fishing* for the Amstrad CPC 464 (cassette).

I have been to many software stockists to try and buy this game, but none of them have it in. So I have ordered it many times in many shops, but nobody is able to get a copy.

I have enjoyed many hours playing this game on a friend's Spectrum, but since then I have moved houses and have tried loads of computer shops all over England.

I wrote to Alligata (who released this game) but had no luck. My letter to them was returned by the post office stating that this company had gone away!

Matthew Taylor
Bury St Edmunds

The rights to some of Alligata's games have recently been bought up by Superior Software, but a fishing game endorsed by Ireland's footy boss is not, unfortunately, one of them. Does any kind soul have a copy they'd like to sell, lend or even give to poor old Matthew?

Sensible suggestions shock!

As a father with young children who are becoming increasingly interested in the family computer I wonder if you might do a little more to cater for this in the magazine. The following are suggested:

1. An indicator on games reviews i.e. 'this might appeal to under 7'. Sometimes your reviewers mention this, could it be formalised? Some people might disagree but to my mind there is a difference between the 'killing' that takes place in say, *Kane*, to say, *Barbarian* and games like *Parky* or *Paperboy* manage to be good games without any death at all. The difficulty of the game-play would of course have to be another factor in any recommendation.

2. How about the equivalent of a 'Children's corner' somewhere in the mag? Perhaps containing a simple type-in or comic strip etc. This would enable the magazine to be shared rather than just being for dad.

3. *Type-Ins* seems to go from strength to strength but I wonder if there might be scope for those who can't write programs themselves to have a chance to indicate what they would find useful. Besides being of value to the sender of the idea it might prove stimulating to the 'typers' to try to deliver the goods. I'll start the ball rolling if you like by asking for a program that will make a library disc of the discs in my collection and allow me to add, delete, print etc.

L. Smart, London

1) Perhaps. The trouble is, young people are extremely sensitive if they think, rightly or wrongly, they are being patronised, and if we said, 'This game is great for five to seven year olds', five to seven year olds all over the country would be saying, 'I'm smarter than that, I can play loads of games fifteen year olds play'. Indeed, I have recently heard this argument used by software houses as their reason why they don't do the same.

2) We try not to ghetto-ise the mag more than is absolutely necessary: we know many 'serious' users play games, for example, and many alleged games freaks are greatly interested in word processing and so on. So our attitude to children isn't to say, 'Here, you get on with this while we grown ups do the real stuff'. I know that's not what you're suggesting, but it's difficult for adults to get the tone consistently right for children. However, let us stress that we are particularly interested in this suggestion, and if any suitable contributions come our way we shall endeavour to use them. Young people out there: get working!

3) Now this is a marvellous suggestion, and contributions are warmly invited. What would you like to see in Type-Ins?



REACTION EXTRA

Digital Integration's Dave Marshall and Romantic Robot's Alexander Goldscheider get serious



" THEFT! Is shop lifting socially acceptable? Or burglary? Of course not! So how on earth can magazines such as *AA* support companies like Romantic Robot?

I refer to advertisements in your September issue (and many previous occasions) for the Multiface Two and other similar devices. To quote the advert, 'No program is safe, solid gold for hackers' – no mention of course that copying is illegal! So who cares? Perhaps we had better lay out a few facts and we'll begin to appreciate the consequences.

Software houses employ programmers, administrators, marketing managers, PR agencies etc. We have development costs, production costs, rent, rates and advertising and distribution costs. Our products are marketed through distributors and retailers at discounts that enable them to make a living too.

Imagine you have spent more than £250,000 developing a product over 18 months only to see an advertisement for a product encouraging the buyer to copy your software. Blow a fuse? How restrained... We spend time and effort trying to reduce piracy, not because we're mean and nasty – this is our livelihood at stake!

So what are the excuses? 'You need to have the device attached for the program to run'. Is copying no longer theft? This is sales promotion, not active discouragement of copying. In other words, as long as your friend has one of these devices, illegal swapping and playground sales are OK? What about making the device insert a serial number on the copied program to tie it specifically to that device? Too expensive, I suppose, or perhaps not in the manufacturer's interest.

Here's another one. 'People learn from hacking – how to write programs etc.' A few articles on games design and programming techniques might be more in order and more usable to your general readership. And what making back-ups and changing media? Our policy has always been to help the customer by replacing damaged produce at a nominal charge for p. & p. We also provide an upgrade service if any customer wishes to change from cassette to disk.

Surely we share a mutual interest in seeing copying services banned. Come to mention it, they will be illegal soon ... heard of the Copyright, Designs and Patents Bill? "

Dave Marshall
Director, Digital Integration



" Software – *and* hardware – piracy is a serious problem indeed. The problem with Mr Marshall's letter, however, is that in trying to find a suitable scapegoat he picks on the wrong party and grossly misrepresents the facts. His suggestion that we advertise a product encouraging the buyer to copy his software is ludicrous! Mr Marshall quotes a line from our ad referring to *The Insider*, and associates it with the *Multiface Two*. This is not only unethical, it is just plain nonsense. Furthermore, the quotes are misquoted and taken out of context. We do say, 'No program is safe', but continue, 'once *The Insider* gets in'. There is indeed no mention that copying is illegal because *The Insider* has nothing to do with copying. *The Insider* is a disassembler, it translates bytes into machine code mnemonics. Our ad just stresses its uniqueness – the fact that any program can be instantly disassembled at a touch of a button. This is fantastic for anybody working with m/code – and disassembling/assembling is what programming on Z80 is about.

Of course we are against piracy in any form. The important issue is to draw the line between personal backing-up and illegal piracy. Backing-up is an essential activity in computing. It is perfectly legal and I cannot imagine it becoming unlawful. Since the Lords' recently ruled that the use of twin tape decks – whose *only* reason of being is copying – is legal, how can personal copying of computer programs conceivably be banned?

The Multiface is, among other things, certainly an ideal backing-up tool. The fact that it can transfer between tapes and disks is surely welcome. I appreciate that Digital Integration may release programs both on tape and disk and even upgrade for a fee from tape to disk, but by far not everybody else does. It is also far simpler and cheaper to do it yourself and to put even, say, four different programs on a single disk – hardly anybody would do that for you! Remember that only with *The Multiface* can one decide at which point to stop a program, back it up and continue from the same point next time.

Only *The Multiface* makes it possible to save/dump any screen at any point and is therefore used by many magazines for screen shots. Finally, *The Multiface* has an unparalleled *Toolkit*, again unique because it sits *outside* your computer and can show and change all the *inside* at any time. This is a dream for any serious programming just as it is for simple customising of programs, poking infinite lives, etc.

We have literally hundreds of letters praising *The Multiface*. It has universally received most favourable reviews, has won many awards in the computer press, has been voted the best peripheral, etc. Computer machines use it to review games, top software authors for writing programs – and so on.

But then, its quality is not in question: its possible misuse is. Admittedly, programs saved with one *Multiface* will run on another. Mr Marshall is quite right in saying it would be too expensive to serialise *The Multiface* – not for us, but for the owners as the retail price would jump up and be unrealistic. The serialisation is also highly impractical when it comes to upgrades, repairs, etc.

Above all we are convinced that *The Multiface* is a genuine and unique multi-purpose utility and *not* a pirating tool. We do not believe for a second that it would ever be used for mass piracy – cassette or disk duplication would. In fact, we welcome this debate as it may bring valuable and views and information from the public on the matter, and on the use of *The Multiface* specifically. As for our part, I can only most strenuously refute Mr Marshall's criticism of our products and advertising in relation to illegal copying. I hope we will again see more productive efforts from Digital integration than the misguided and poorly researched letter in question. "

Dr Alexander Goldscheider
Romantic Robot

Dave Marshall is a member of the Federation Against Software Theft. FAST ☎ 01 430 2408.

Well, what do *you* think? Write to *'Reaction Extra'*, *AA*, 4 Queen St. Bath BA1 1EJ


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PAPER TIGER

Has Mirrorsoft's *Fleet Street Editor* been worth the wait? Why does its arrival mean the *AA* finally gets tidied up? Pat McDonald answers these and many other questions

FLEET STREET EDITOR

Mirrorsoft ☎ 01 377 4644 ● £39.95
6128 disk only

Welcome to the only piece of software ever to be left behind by history. Thanks to The Computer, virtually no newspapers are produced in Fleet Street any more. Mirrorsoft have been converting *FSE* for quite some considerable time now – it was mentioned as imminent as long ago as *AA4*! It's long been an AA office joke: the stock reply to avoid unpleasant jobs was, 'I'll get round to it when *Fleet Street* is published'.

Looks like a lot of odd jobs will get done now...

First Impression

The package is encased in an attractive bright red binder. Inside there's a looseleaf manual and two disks. Maybe it's a big program? What's it do?

Fleet Street belongs to that branch of software known as desktop publishing packages. These are used to lay out documents, both text and pictures, into a professional looking finished page or pages suitable for publication. Such software ranges in scale from that which would have difficulty in laying out a club newsletter to the industrial level which uses them to print real books and magazines (such as *AA* – produced on good old 6128's and Apple Macintoshes).

On this sort of scale, it's fairly obvious which end the CPC by itself is closer to – but don't be too quick to judge (see the article in this issue to see how well CPC's do.)



Get down to it

The manual is loose leaf, and starts out well with a hands on demonstration using a partly finished document. This is easy enough to do, and teaches the elementary controls very quickly – as well as offering a friendly welcome to the program.

It's a shame that the manual doesn't help as much from then on. Rather than giving similar tutorials on further features of *Fleet Street Editor*, you are left with a long descriptions of lists of features and not much else. A pity really, because what's there is well written and presented.

I've dealt with the manual, but what of the two disks? Both sides of each of them is used: one contains the main program, the other contains lots of graphic libraries to use in your own document. There are plenty of these, although they are mostly small logos rather than digitized action.

Good stuff

The program has three distinct sections, arrived at via a front end screen showing three icons. The cursor keys or space bar moves the marker from one to the other, and RETURN selects it.

The first part of the package is the graphics section, used to organize the artistic element of a document. It accomplishes this

Press option

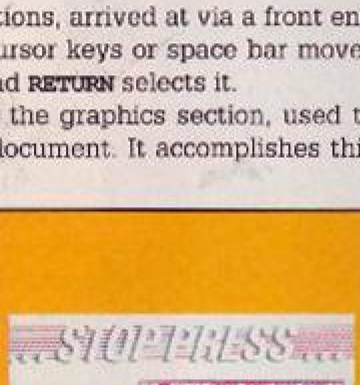
If so far you've got the impression that *Fleet Street* maybe isn't the best thing since sliced bread, you could well be interested in *Stop Press*.

Stop Press (*Pagemaker* as it was then called) was originally announced in the same issue as *Fleet Street*. It too was late (it was reviewed in *AA17*), it too had bugs. But Advanced Memory Systems took note of the huge response from users, and fixed the more obvious bugs. It is to be hoped Mirrorsoft do something similar: we'll let you know when they do.

What makes the difference between the two is that *Fleet Street* has three complete modules, which rarely necessitates the programs accessing the disk drive and so is relatively fast. This is in complete contrast to the AMS offering, which loads virtually every function from a program disk. So although using lots of different functions is slow, the way they operate is more sophisticated, because the disk has more space for programs than the memory.

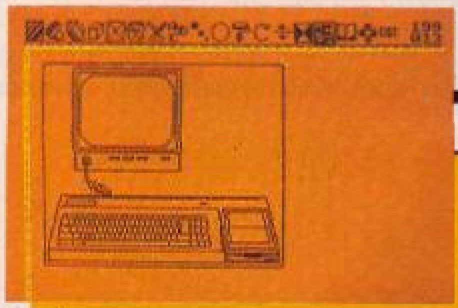
The most fundamental difference is the dot resolution on the printed page. The maximum Epson dot resolution uses quadruple density graphics to produce 1,920 dots per line. *Stop Press* can print a page out on this screen, using the whole width of the page. By contrast, *Fleet Street* prints out a page across just a quarter of the page. In other words, the dot resolution is much less. This means that there's less you can physically put onto *Fleet Street* and the output looks cruder.

In addition to this, there are lots of little things that make *Stop Press* just that little bit special – you can load extra fonts, plug in a video digitizer, use graphics from outside much easier, scroll around faster, and so on.



This is unfortunate, because Mirrorsoft's product is much friendlier and easier to use. The way the individual parts all load – allowing you to get on with editing – together with the way you can adjust the baselines of columns, make the product fairly novel. Text editing, bugs notwithstanding, is much simpler. And it's cheaper, retailing (with its graphics library) for £39.95: compare that to the AMS price of £74.98 (price includes *Extra! Extra!*, the *Stop Press* library).

Even with the price difference, *Stop Press* is still head and shoulders above the competition. Hard luck Mirrorsoft, congratulations AMS.



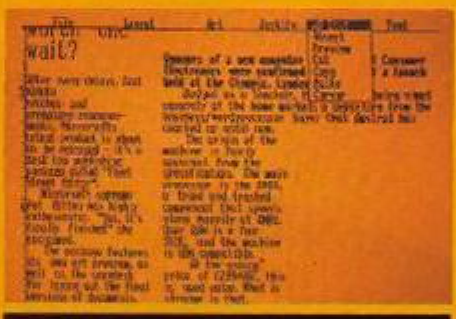
Setting up artwork...

HOLD THE FRONT PAGE!

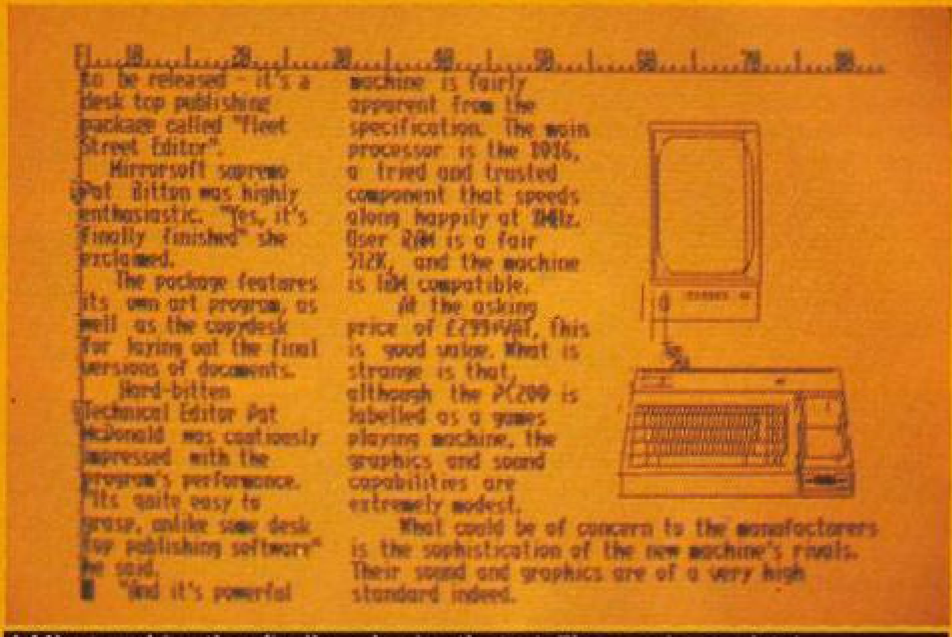
Well, not quite. Here's how *Fleet Street Editor* copes with a page of *Amscene*



Setting up the headlines...



Main text should be well spaced...



Adding graphics, then finally reshaping the text. The page is complete!

through simple two tone pictures. As every Amstrad owner knows, Mode 2 is the black and white high resolution mode, yes? So the program should use mode 2, yes?

Well, no, actually. Instead images are read into the machine using medium resolution mode 1. The reasoning, apparently, stems from the fact that the pixels are square, rather than rectangular, in this mode. Artwork and drawings are thus easier to get into proportion.

The cursor/pointer used in the art package is a nifty little item, featuring the usual cross hairs and a flashing dot in the middle. If the dot doesn't flash, it means the machine is busy doing something. The SPACEBAR is used to confirm decisions (why?), rather than the RETURN used in other parts of the package. The above is used to control the WIMP enviroment which stands for (all together now!) Windows, Icons, Mouse and Pointer/Pull down menus, depending on where you heard it.

Running across the top of the screen is the usual row of icons. By the left (wait for it!)... **Brush size adjustment, paint, pencil, boxes, eraser, undo, scissors, text, zoom, circle, fill, rotate, mirror, invert inks, disk access, library, re-size** and **exit**. Also on the screen are the **screen co-ordinates**. For an exciting, dynamic explanation of what they're used for, read on.

Freehand

Doodling on the screen is easy – and fun. The regular drawing functions are there: line drawing, circles and boxes created with 'elastic lines', so exact positioning is not difficult, though most of the time you probably won't be so finicky. Other aids to getting your artwork just right are the screen co-ordinates, which can be remembered when drawing point-to-point. Drawing the edges of shapes, then, is more or less trouble free.

Filling these shapes with patterns – to give the effect of shades of light and dark – is also no problem. The fill command gives a list to choose from, and you can define your own pattern. The brush command is similar, but the pattern only goes where you put it, as opposed to fill splattering 'ink' all over your design. The brush size is adjustable in both width and height. Regrettably, a spray-can function has not been included.

The graphics libraries stored on the second disk can be accessed from the art program simply. They can be loaded into a spare screen, and the artwork you desire can be moved into the main editing area with the minimum of fuss.

Text is fairly easy to add onto a piece, although there are drawbacks with this function: characters can be printed in any direction, but no extra fonts can be added, and text always remains in the same size. And because shift is used to swap between icons, capitals must be selected using Caps Lock – not the easiest thing to remember. The *Copydesk* should settle most of these deficiencies.

A copy of the screen before the last operation was completed is always held in memory, so experimentation is not fraught with danger. The icon, strangely enough, is a face.

Job done

Finishing off artwork can be laborious, and the editing operations that help with this are good. Mistakes are erased with the paint brush option using a blank pattern. Large rectangular areas of the screen can also be cleared, and wiping the whole screen has to be confirmed by pressing Y.

Moving areas of the screen about – cut/paste operations to the technical – is efficient, if somewhat slow. Similarly, mirroring and rotation can be done on small parts of the screen. Zooming in for some fine detail is just as convenient to have, although RETURN has to be pressed to finish it, not SPACE.

There is a re-size function to enlarge or compress an area, and distortion of the image is minimal.

Finally, artwork can be saved out as a cut, or box, saved to disk in a compressed form – a full screen might use as little as 8 or 9K. These cuts can be included on a page.

Problems, problems

Using this art program is easy, but importing graphics from outside ranks with turning your 464 into a 6128 for difficulty. The problem lies in the fact that ink 0 is used for the foreground (ink colour) and ink 1 is used for the background colour. So images that you load look like photographic negatives.

Admitted, writing a Basic program to invert the inks (or even process them) is not *too* difficult, but it shouldn't be necessary in the first place.

Copydesk

This part of *Fleet Street* deals with actually producing a page, using some fairly traditional methods. Sitting comfortably? Then we'll begin.

Until a few years ago, printing masters were set up by typesetters, who used to insert characters made out of lead into a blank page board. This would be set up manually to have the correct layout, with the margins set up, and so on. It was a time consuming and extremely skilled task.

In a superficially similar way, *Fleet Street* lays out the text across a grid-like pattern that conforms to the page layout. The grid is alterable, so that you can place pictures on the page, and have text flow around them. This is a very fundamental feature – the program remembers the text and pictures independently of the screen memory. If the layout is changed, the page is redrawn from this backup buffer to conform with the new pattern.

When you've loaded (and turned over the disk) you can select the margins. A wide margin looks better, but gives you less space to work on. After that, you select the number of columns – the page you are reading has two.

The screen setup is similar to the art program, in that there is an options line across the top of the screen. This contains the words (no icons): **File**, **Layout**, **Art**, **Justify**, **Edit** and **Font**.

Incredibly *slow*

Edit is probably the most used. It contains the option **Insert**, for getting at the text. You must first select which column you wish to edit – they are all independent of each other. That way, a mistake on one doesn't generally mess up the others as well. There are also some cut and paste options, which work very well for editing text. You can even examine the cut and paste buffer, to check that you're moving the right thing. Oh, and you can get a preview of your work – although this takes minutes, and involves saving the page to disk.

Inserting text is probably the most time consuming part of using the program. The scrolling up and down of the page is so incredibly *slow*. You can almost see the program thinking, 'Hmm... Shall I scroll a bit more?'

The program supports a fair range of fonts, all selectable from one of the pull-down-menus. They include both serif (with tails) and sans (without). The full list is West End, Ritz, Italic, Cube (science fiction), Full, Engraved, Olde and Stencil. – the names are loosely descriptive of the fonts' various appearances. A bold option is included, as well as 16 point and 24 point size characters for headlines and straplines.

Unfortunately you cannot load or design any alternative fonts – your'e stuck with the above. It may seem a lot, but only four fonts for headlines? Methinks two pages produced with this by two different people will look almost identical.

Justification of the document is configurable, in that you can choose between left justified (ragged edged), centre (so everything is central) and full out, which makes lines fit across the screen as much as possible. The trouble is that this function is global, i.e. if you redraw the screen, all the text appears using the one justify option! You can get round it, but it's tricky.

Inserting text is all very well, but the pages are generally formatted around the pictures. These are loaded from within the **File** menu, and put onto the screen using the Art menu. Positioning is accurate down to the character scale which is always onscreen, so getting it right isn't difficult. Problem: at present, loading graphics corrupts them! What you get is the original picture, with extra lines cutting it at random. Not good.

There are also two art commands, line and box, which can be used to surround text to good effect. The hassle (and positioning graphics is just as bad) is you can only place artwork on what is onscreen – which means scrolling down to the relevant part of a page. Once you have some artwork, you'll probably have to tidy up where the text goes, so that the two don't overlap. *Fleet Street* is good at this. You can choose to do a whole change, which changes all of the text column widths at once: a single line change, good for irregular columns (wrapping around graphics): and above or below the cursor line, so you can setup boxes of text quite easily.

In a similar vein, you can adjust the 'leading', an archaic term which refers to the spacing between the lines of text – the 'baselines' *(we've increased the leading in this paragraph to illustrate what we mean.)* Spreading your text vertically in this way makes it much easier to read.

Finally, the **File** options generally do the housekeeping tasks neccesary to keep the system working. These include the obvious features – loading and saving text and pages, and loading graphics – as well as the more novel...

If a column overloads with the text, the excess can be placed in an overflow buffer. This is similar to the cuts buffer, but it can be retained if the screen is cleared. So you can put more text onto a second page if you run out of space, although you must finish with the first page first: you can only edit one at a time.

Head to head

	Stop Press	*Fleet St Editor*
Editing Area	911 X 557	640 X 640 (approx)
Scrolling Speed (Page top-bottom)	4 secs	1 min 30 secs
Print options	Good	Fair
Standard screens?	Yes	No
Page length in bytes	69632	37888

The evidence is incontrovertible: *Fleet St* is hopelessly underpowered compared to *Stop Press*.

The limit

One of the problems with *Fleet St* is to do with the way it remembers everything that goes onto a page. Inclusion of lots of graphics is not possible, because the memory fills up relatively quickly. Two 9K pictures won't fit at the same time. You can't just load one, put it up, delete it and load the next either – it's wiped from the page as well as memory when you delete it.

The printing options are fair. Both draft and quality prints are supported: put simply this means that the print head prints either once or twice.

All in all, I can't say I'm terribly impressed with the **Copydesk** part of *Fleet St*. The problems aren't just the bugs, which are fairly awful in themselves: no, it's the slow speed of scrolling, and the lack of memory for graphics.

I did say that there were three parts to this, and the **Administration** is the last module. It is used for mundane tasks like setting the default drives, changing the screen colours etc, and also for converting four colour mode 1 screens into two colour mode 1 screens. It makes no attempt to interpret the image, so you're generally left with a negative image that's unusable.

Finished?

In conclusion it must be said that, even for a pre-production copy, this program is useless for desktop publishing. The only purpose for which people would buy it is as a challenge: make up a page **despite** the bugs and user unfriendliness...

GOOD NEWS	BAD NEWS
■ Relatively cheap. ■ Manual is well written. ■ Easy to edit text.	■ Bugged beyond belief. ■ No extra fonts. ■ Not exactly fast.

S.D.C.

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ABSOLUTE BEGINNERS

More Basic the easy way

Even if you're crazy about numbers, that last program probably didn't get you too excited. Well, let's see if we can do something a bit more interesting. Try this:

```
1Ø FOR a=1 to 5Ø
2Ø CLS:MOVE 32Ø+a,2ØØ-a
3Ø DRAW 32Ø+a,2ØØ-a,1
4Ø DRAW 32Ø+a,2ØØ+a,1
5Ø DRAW 32Ø-a,2ØØ+a,1
6Ø DRAW 32Ø-a,2ØØ-a,1
7Ø NEXT a
```

It's a modified version of the square-dragging program from last time, only this time the square stays in the middle of the screen,starting as a point of light and gradually growing larger. You could use the STEP command to make it grow faster, the way we did last time. Try modifying the program to read like this:

```
5 a=1:b=2
1Ø FOR c=1 TO 1Ø
15 a=a*b
2Ø CLS:MOVE 32Ø-a,2ØØ-a
3Ø DRAW 32Ø+a,2ØØ-a,1
4Ø DRAW 32Ø+a,2ØØ+a,1
5Ø DRAW 32Ø-a,2ØØ+a,1
6Ø DRAW 32Ø-a,2ØØ-a,1
7Ø NEXT c
```

Now you'll find the square grows faster and faster, as if you're flying towards it. So what's changed?

The variable 'a' controls the size of the square. In the original program 'a' was the loop variable, so it increased by a fixed amount each time. In the modified program on the other hand, 'a' doubles each time. That's what the 'a=a*b' in line 15 does. It's the same technique we used in the 'powers of 2' program you typed in earlier on, only here the variable 'b' is used instead of 2. It works the same way though, because line 5 set the value of 'b' equal to 2.

The only problem with this modified program is that it's a bit fast. If we want to slow it down, we're going to have to reduce 'b' a little. Try changing line 5 to '5 a=1:b=1.5'.

Now edit line 1Ø so the loop repeats a few more times: '1Ø FOR c=1 TO 2Ø' is about right, but the precise number isn't too important. To slow the program down still further, just set 'b' to some even smaller number - but keep it greater than 1 – and alter the loop count in line 1Ø.

Print

The PRINT command is pretty cumbersome to use. Try this little program:

```
1Ø FOR b=1 to 1Ø
2Ø PRINT "This is message number"
3Ø PRINT b;
4Ø PRINT "out of total of ten"
5Ø NEXT b
```

Even using question marks, that's a bit long-winded for such a simple operation. If you wanted to do all that printing in one program line, you'd end up typing.

```
?"This is message number ";:?b ;:?"
out of a total of ten"
```

Notice the way you have to put semicolons to stop the CPC from moving down a line, immediately followed by colons to seperate it from the next PRINT command.

In fact, you don't have to do anything so complex. If you want to print a whole load of things on one line of the screen be they messages, variable values or whatever - you only need one PRINT command for the lot of them. That dreadful line above becomes.

```
?"This is message number";b;" out
of a total of ten"
```

This time you don't need any colons, because you're not trying to separate different commands. The only command in the line is the question-mark at the beginning, meaning 'PRINT'. The rest of the line is just the material you want printed - we call this the *printlist*. The semicolons between the different items not only separate them, but also make sure the CPC prints them all on the same line of the screen.

Although PRINT was one of the very first commands we covered, we saw it there only in its simplest form. When we met FOR-NEXT loops a couple of issues back, we came across another use of PRINT. This little program shows both forms of PRINT command at work:

```
1Ø PRINT "And now for a whole
load of numbers"
2Ø FOR a=1 to 1Ø
3Ø PRINT a
4Ø NEXT a
5Ø PRINT "That's all folks!"
```

The PRINT commands in lines 1Ø to 5Ø each put a message on screen, while the one in line 3Ø prints out the value of the loop variable 'a' for each pass through FOR-NEXT loop.

This much you've seen before in other forms. Now try typing in a new line between lines 2Ø and 3Ø.

```
25 PRINT "Number";
```

Note the semicolon at the end of the line. Don't put a colon there by mistake, or you'll miss the point of the exercise.

You won't be surprised to find that line 25 prints the message 'number' on screen. Up till now, each PRINT message has gone on its own separate line of the screen.

Every time the CPC gets a PRINT command it puts the message (or variable value or whatever) on screen and then moves down a line.

It does this because the CPC assumes you'll want the next message printed on a separate line. You can see this very clearly indeed if you add this new line 35 to the program:

```
35 PRINT
```

When you now run the program you find it leaves a blank line after each 'Number' message. The PRINT command in line 35 makes the CPC move down to the next line of the screen, even though there isn't any message to print.

As we've seen, the CPC assumes that it's supposed to move down a line after each PRINT command.

The semicolon on the end of line 25 tells the CPC to stay on the same line, and this means that line 3Ø prints the value of 'a' on the same line as each 'Number' message.

SUMMARY

We've seen that many commands have numbers which control them: these numbers are called operands. In the last few instalments we saw how variables can serve as operands. This time, we've seen that an operand can in fact be an arithmetical expression like 'a+1Ø' or 'c-d+32'.

You can perform all the normal arithmetical operations, but some of them use unfamiliar symbols. While 'a' plus 1Ø is just 'a+1Ø' and 'a' minus 1Ø is 'a-1Ø', 'a' times 1Ø and 'a' divided by 1Ø are 'a*1Ø' and 'a/1Ø' respectively.

Expressions aren't just useful as operands. They can also be used in assignments - the commands which assign values to variables. Things line 'a=b' or 'a=45*b' are fine. You can take this even further with assignments like 'a=a+1Ø' which increases 'a' by 1Ø, and 'a=a*2' which doubles 'a'.

Next month we put our newly acquired knowledge of printing to work

WHAT USE IS A CPC?

So you can shoot aliens with it. What else can you do? Steve Carey hears the views of some serious users

In the month that sees the launch of The Sinclair Professional Series PC 200 (see Amscene), it is worth pointing out that the CPC itself is used by precisely the groups of people the Sinclair is aimed at. On the one hand there are the games aces, who value the CPC's sound and graphics capabilities; and on the other there are the serious users, who know that the CPC has been greatly underestimated as a small business/ word-processing machine. But don't think that the two groups are mutually exclusive: some of the fiercest joystick wagglers by night are respectable business users by day, and many Protext and Tasword users play a mean game of Driller or Bard's Tale when they think no-one's looking!

So Steve Carey set out to discover just what serious CPC'ers do with their computers. And he was surprised to discover just how diverse are the businesses and enterprises that depend on CPC – from magazines to burglar alarm catalogues, and from indexing slide collections to teaching computer literacy...

Hard cell



Rational Solutions' *AtLast Plus* is the brainchild of **Mike York**, who wanted to write a decent accounting system, but found himself dissatisfied with the database programs available at the time for the CPC.

'It's quite normal on CP/M database programs', says Mike, 'to have to re-sort an entire file – which can take hours on longer ones – after adding a new record or editing a key field, because automatic index updating is rarely incorporated. And often you have to use upper case names if you want alphabetical sorting, because normal ASCII sorting puts all lower-case letters after all upper-case letters!'

So Mike wrote his own. 'Getting a new program on the market when you are a one-person business and have no reputation is a very difficult task', he recalls: 'My biggest problem was getting people with influence to take a serious look at it'.

'One way and another the accounting program has been indfinitely psotponed, since publishing, marketing and maintaining *AtLast Plus* has taken nearly all my available time. Anybody out there want an administration and marketing job so I can get on with some programming?'

Peter Dance – who admits only to being 'on the wrong side of 40' – bought the original *AtLast* when he bought his CPC. (He discarded his green screen monitor, by the way, and installed a Philips amber screen instead – even though Amstrad told him it couldn't be done!) 'Over the two and a half years since then', he says, 'I've found that *AtLast Plus* has subtly added features, making printer control easier, for example, with fewer keystrokes and so on'.

Peter – 'I never play games on my CPC: it's policy' – uses *AtLast Plus* to run a colour slide library for Air-Britain (Historians), an amateur historians' organisation, of some 6,800 items (allowing for duplicates it's nearer half a million!). They're indexed by slide number and aircraft type, for instance, and the instant, no-sorting method of *AtLast Plus* is a big boon.



Peter – a busy man, clearly – also uses it to run a kit car owners club database (CCLUB) for the Charger Club,



and admits that a properly relational database might be of assistance, but claims to manage perfectly well without it.

He's done cheque reconciliation on *AtLast Plus*, too – 'Some people use spreadsheets, but with a bit of ingenuity a database is quite sufficient' – and has clearly experimented and tested it to its full potential. 'Certainly from the point of view of general usefulness there's no application I've required on my CPC that *AtLast Plus* hasn't been able to perform'.

See Special Offers at the back of this issue for a very special deal on *Atlast Plus*

Win the pick of the pack!

Perhaps we've whetted your appetite, suggested some possibilities you've never seriously considered before?

We have? Good. Because we have a whole heap of software to give away, and very soon the first half dozen names we pull out of the *AA* bag will be opening a large parcel containing the following pile of CPC software goodies:

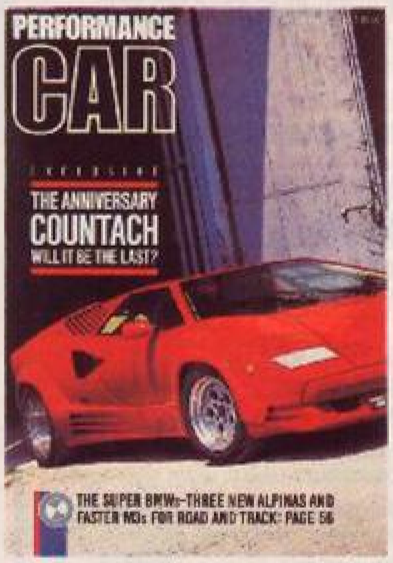
- ***Mini Office II*, the best-selling budget word-processor-cum-data-base-cum-spreadsheet-cum-comms...;**
- ***Money Manager*, the financial management package ideal for personal/small business use;**
- ***Parrotry Plus*, the art package Pat 'Picasso' McDonald rated as 'one of the most useful programs ever released for the CPC range';**
- **and *Protext*, the word processor used here in the *AA* office (but don't let that put you off!).**

So simply send your name and address on a postcard or the back of an envelope (positively no envelopes opened!) to: *AA Serious Comp, Amstrad Action*, 4 Queen St, Bath BA1 1EJ, *before November 30th 1988*.

Competition not open to employees of Future Publishing, any of the participating companies or their relatives. Sorry mum.

CPC performance!

Jesse Crosse, editor of ***Performance Car,*** is convinced that, the CPC, with ***Protext*** and ***Promerge,*** is 'vastly underrated. There are things you can do on it and with it ten times better than with the 16-bit business machines everyone's always raving about – and they cost ten times the price!'



Jesse knows what he's talking about. He introduced the CPC and ***Protext*** into **AGB Specialist Publications** which now uses about 50 of them to do everything a publishing company has to do – 'from journalists writing copy, to secretaries typing letters and sending out individually addressed letters to competition entrants'.

Jesse has written a number of programs himself to exploit the full 'vast potential' of ***Protext*** and ***Promerge*** – which, as he points out, can be made to double as a database with full multiple criteria search facility.

All the journalists on *Performance Car,* as well as many other people working in the company, use Jesse's specially devised phonebook program. 'Even with ROM-based ***Protext***', Jesse points out, 'you can have a bootup, as we do, which loads my phonebook onto a split screen, so it's effectively memory-resident while you work on the top word processing.

'It works using ***Promerge's*** mailmerge facility with the printout, obviously, to screen. And you get around the file-length limitation by having 26 files entitled

`ADDRESS.A, ADDRESS.B`

and so on. That also helps cut down on the search time that's inevitably a problem with hundreds of entries. (Of course the real drawback about such a phonebook program is persuading people to spend the time keeping it up to date!)'



The most amazing thing Jesse has so far done with ***Protext,*** however, is a truly remarkable roadtest generation program. As you'd expect, a magazine that tests Porsches and Aston Martins every month (it's a hard life!) must produce an elaborate 'Roadtest Specification' that details such things as fuel consumption, acceleration, bhp per ton and per litre and so on. So Jesse wrote a program...

'It's the car journalist's nightmare, that simple little panel. It used to take 41 calculations and easily several hours' work. So over a period of time I wrote something in ***Promerge Plus*** that runs to 13 feet of printout to do it all for you. You simply key in the data and it does *all* the calculations for you – it even asks you whether the test vehicle is automatic or manual, and adjusts the figures accordingly!

'Then it merges the results into a standard form file and prints out all the results in panel form.'

Have you considered making such a program commercially available? 'Oh no. The thing is, it's obviously limited to magazine work, and more particularly car mags – in other words, the competition. And I'm damned if I'm going to let them have the advantage we've got!'

So the CPC is capable of more than it's usually given credit for? 'Absolutely! It's a fantastically powerful machine for the price, and it's tragic that everyone's underestimated what it can do. With a CPC and ***Protext*** you can run a ridiculously cheap operation – actually I would say it's superior to something like ***Wordstar*** on an IBM, but no-one would believe me!

'Frankly, no-one's even remotely plumbed the depths of what ***Protext*** can do. If you look in the nooks and crannies of the manual (very well written, by the way), you can find all sorts of things – invoicing using ***Promerge,*** for instance – that most people don't even dream of doing. You really don't need a very big brain to make it do some very interesting things'.

So why have so few people in business tumbled to all this? 'Probably because it's not the industry standard. Everywhere you go you find IBM PC's – but look at how much they cost!'

See here!

- ***AA13*: seven page special devoted to making music with your CPC. (And see also *AA26* for everything you ever wanted to know about Midi.)**
- ***AA18*: comparative review of: *Pyraword, Protext, Tasword, Mini Office II, WordStar, NewWord,* and the educational package *Pendown.***
- ***AA23*: set of excellent tips for *Tasword, Protext* and *Wordstar.***
- ***AA29*: six top spreadsheets compared – *Cracker, First Calc, MasterCalc 128, Matrix, ScratchPad Plus* and *SuperCalc 2.***
- ***AA30*: five top databases compared – *Random Access Database, Ultrabase, AtLast Plus* and *Masterfile III.***
- ***AA32*: survey of available educational software.**

Software featured

Program	Producer	Rev'd *AA*	tape	disk	ROM
Brunword 6128[1]	Brunning Software ☎ 0245 252854	24	£16.50	£25	
Info-script	Brunning Software	35		£46	
Protext	Arnor ☎ 0733 239011	3	£19.95	£26.95	£39.95
Prospell	Arnor	9		£24.95	£34.95
Promerge	Arnor			£24.95	
Promerge Plus	Arnor				£34.95
Protext Office	Arnor	34		£34.95	
Protext Filer	Arnor	34		£24.95	
Tasword	Tasman Software ☎ 0532 438301	1	£19.95	£24.95	
Masterfile III	Campbell Systems ☎ 0378 77762	30		£40	
Parrotry Plus[2]	Treasure Island ☎ 0492 593549	33		£29.60	
OCP Art Studio[3]	Rainbird ☎ 01 240 8838	14	£19.95	£24.95	
Advanced Music System	Rainbird	13		£29.95	
Money Manager	Connect Systems ☎ 01-743 9792	24		£24.95	
Mini Office II	Database Software ☎ 0625 879940	6	£14.95	£19.95	

[1] Brunning offer a free week's trial of Brunword
[2] Two disks
[3] There is a demo disk available. Price £3 approx.

● See also this month's *Buyers Guide*

Write on with your CPC!



Protext, written by **Gavin Every**, was first released back in August 1985, with *Prospell* and *Promerge* emerging (sorry) in April of the following year. Talking to **Mark Tilley** of **Arnor** is a breath of fresh air, for he claims that *Protext* is still selling in 'respectable quantities', and indeed boldly asserts that it has overtaken its rival, *Tasword*, as the biggest selling CPC word-processor. (For the remarkable story of how a whole publishing company runs on *Protext* on CPC, see elsewhere in this article.)



Chris Garrett – yes, the **Garrett** of the *AA* cartoons – runs a whole business simply using *Protext*. Chris has an enormous stock of pop music magazines of the last thirty years featuring artists from the Beatles to Bros (whoever they are), hotly sought after by fans all over the world. (He's having an *extension* built to his house just to contain them!) He simply searches his *Protext*-based catalogues of some 4,000 items (and rising) and copies references into a separate file, printing them out and sending them to the person who made the request.

But what about the file length limitation? 'Well, I can get a run of about eight or nine years of a music paper onto one file, and that's quite sufficient. As far as I know, I'm the only person in the country doing it this way', he claims: 'there is someone else in the same line of business – but he still does it all on typewriter! I could cry when I think of the wasted effort: *Protext* is only a word processor, but it's ideal for shuffling round vast wads of indigestible material'.

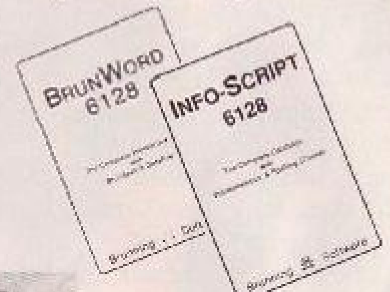
Still, even Chris baulks at using *Protext* for his accounting!



Rev. Peter Amies, a Baptist minister who is one of ten area representatives for the Baptist missionary society – and they all have CPC's! – has used both *Brunword* (recently upgraded to *Infoscript*) and *Tasword*, and comes down very firmly in favour of the former. (He does, however, miss one *Tasword* feature, which indicates whether you're in lower or upper case and can convert upper back to lower at a stroke.)

Rev. Amies, 61, had some previous experience of computing, using a Spectrum for a number of years. Nowadays, however, it's the CPC and *Infoscript* that helps him word process articles, sermons and seminars. He also uses *Tasprint* for producing notices and captions for photographs.

The update to *Infoscript*, he says, was a 'marvellous' idea, with an 'excellent dictionary that's fabulously fast compared to *Tas-spell*'.



Peter Ashton runs **Pass Alarms** with the assistance of *Brunword*, and more recently has upgraded to *Infoscript* – which integrates the word processor with a database.

Peter, 31, runs an alarm installation company by mail order, and runs his catalogue on *Infoscript*. He has two databases, in fact: 'one for installation details, servicing and so on; and another for my catalogue'. And he uses *Brunword* to draw up wiring diagrams (!), with numbered wires and grid matrices of dashes and dots.

'I had previously used *Tasword*', Peter recalls: 'but I found it lacking when it comes to justification and spell-checking. I saw **Brunning's** offer of a week's free trial and decided to take them up on it. And I got hooked'. The main difference, he finds, is sheer speed, which he finds 'quite remarkable' in *Brunword*.

One problem Peter shares with many users of databases is the time it takes initially to enter the data: 'Getting things going is time-consuming. Every house is different, of course, and I've amassed lots of different estimates. But I'm beginning to find now that I can patch and paste pieces from already existing files to make up new ones'.

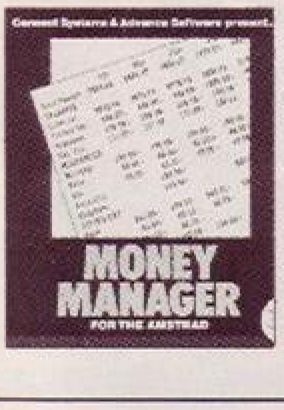
'It's a super program', he concludes, and the CPC is a super machine. I'm perfectly happy running my business with both'.



Taste for accounting?

Accounts programs for the CPC are something many of us imagine we could probably write if only we had the time. Indeed, they typically get written for the benefit of the author him/herself – another one, called disarmingly *Simple Accounts Routine* is out very soon (£15 from Douglas Thompson, 8 Hyholmes, Bretton, Peterborough PE3 8LG).

The story of *Money Manager* is typical. Gavin McHamish, who wrote the program, has an engineering background and wrote the original program for his own benefit when he found there was nothing commercially available to do what he wanted. So in 1986 *Money Manager* was born. Now in its third incarnation this financial management software for personal and/or small business use' is still going strong.



Our review, way back in 1986 (remember reveiwer Bertram Carrot?) judged that *MM* has 'detailed analysis of accounts' and makes 'good use of screen displays and graphics'. The main reservation – a general one about accounts/personal finance packages – was to wonder how many people have the self-discipline to continue updating their figures after that initial surge of enthusiasm has gone.

We spoke to John Willrich of Southampton, who has been using *MM* for eighteen months and finds it immensely useful. Not only does he use it for keeping up to date with his own incomings and outgoings, but as an executor of a relative's will he found *MM* indispensable.

Recently John (who's 56 and works at the Motor Museum at Beaulieu) went on holiday to the States and decided to calculate just how much it had *really* cost him. Using *MM's* class code feature, which enables the user to sort by type, he discovered that he'd actually spent something like twice as much as he'd thought!

Although in general he's delighted with *MM*, there are two niggles he has: the column for entering the description of the item of expenditure could be a little larger; and once a reference – such as a cheque number – has been entered, it cannot be completely erased: something (a zero, for instance) must remain.

'Obviously you don't rush to your CPC every time you buy a stamp, but if you keep a record of your cheques and credit cards, standing orders and so on, you can keep a good track of how much money you *really* have left.'

All in all, John finds *Money Manager* 'super', but adds: 'It's only as good as you are. If you're prepared to stick with it, it's excellent. But if you're not, you might as well carry on working out your expenses on the back of an envelope!'



Mini Office II

Talk to Database, the people who produce the bestselling *Mini Office II*, and you'd think the CPC was going to make a late surge to take over the world. This combined word processor, database, spreadsheet, graphics, label printer and comms package has sold by the lorry-load.

When the enhanced version of *Mini Office* appeared in early 1986 it was claimed that 26 man-years had gone into the programming. Whatever the truth behind that claim, the money was certainly well invested. It's sold in tens of thousands across a variety of formats – with Database claiming the unbelievable total of 400,000 total sales!

Now they've planned extensive advertising and offered an extra discount to dealers – which suggests a refreshing faith in the CPC marketplace.

Martyn Newman, 35, is Deputy Manager of Stockport's YMCA Information Technology Centre, and he has used *Mini Office II* to train YTS workers in basic computer literacy. For two years he took ten or a dozen trainees at a time on a City and Guilds Course developed in conjunction with the CBI – a course he has successfully sold to a number of YTS managing agents. If anyone knows *Mini Office II*, he does.

'It's a very robust package', he says: 'and while you get only what you pay for – as always! – it's very good value for money.

'Of course, it has its limitations. When you're used to *Supercalc II*, as I am, a spreadsheet which is limited to so many columns and so many rows, and in which reformatting a sheet is so difficult, takes some getting used to. Similarly the database is restricted in that it's all memory based, dependent on RAM capacity rather than disk space.

'But perhaps I'm not applying the correct standards here. *Mini Office II* is a tremendous package at the price – it can't be beat. And for people who've never touched a computer keyboard before – the people I'm teaching – it's an excellent tool.

'It's like the CPC itself, really. For 80% of individuals and small firms it's ideal, especially if you haven't the funds to splash out £2000 or more on a business machine'.

Art for CPC's sake

Treasure Island first released ***Parrotry*** in late 1986, and ***Plus*** in May of last year. When we reviewed ***The Informer*** (*AA33*), the latest in the Treasure Island stable, Pat McDonald called it 'one of the most useful programs ever released for the CPC range'. But a dynamic program such as this is not far short of impossible to demonstrate without you seeing it in action, so **Merv Rogers** – who wrote the programs – has recently had the bright idea of boosting sales by selling a £3 demo disk of what this art/display package is capable of.



Barrie Knight of Mortimer, Berks, produces his Christmas cards using *Parrotry Plus*. The pattern was drawn on a FACIT 4550 A4 6-pen plotter, driven by a utility produced by Treasure Island. He's very happy with the results.

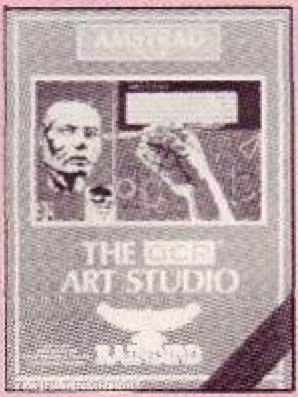
Among art packages, **Rainbird's *Advanced Art Studio*** is one of the best and certainly one of the most popular.

Martin Christmas, 25, who's in retail management, is very impressed. 'I use it, for example, for editing and printing out loading screens of games', he says. 'The only trouble I've found is getting to grips with the various colours – that took a while to master. And the pass-word protection, while I can understand why they did it, is a real pain. Still it's excellent value for money'.

Chris Raby, also 25, of Nelson has been using it for 18 months and still returns to it regularly. 'It's exceptionally good', he says: 'My only complaint is that when you change between modes the picture you're working on tends to get scrambled'.



Benjamin Nugent agrees. Ben, 11, got it a year ago as a present (for passing an exam!), and still uses it 'quite often'. He sometimes loads in loading screens from games (*Paperboy* current favourite) and prints them out. He's impressed with the quality of print-out, though he wishes it had a greater magnification than 8x8, and hates typing in the password every time! All in all, he considers it one of his favourite pieces of software.



As does **Geoff Balding**, a postgraduate student. As a user rather than a programmer, he relies on other people's efforts, and when he read the consistently favourable reviews of ***Advanced Art Studio*** he decided there must be something to it.

'Getting used to the way it works takes some time', he says, 'especially the drop-down menus. But I'd used ***Screen Designer*** and ***Melbourne Draw***, and this is better even than them'.

Any problems? 'Yes, one or two. Setting things up to do a hard copy isn't as easy as I'd like to be – especially with my printer (DMP2000)! Scaling is difficult, and you've usually got to try a few goes to get it right'.

Sounds good

Although the CPC's sound is not perhaps anything to write home about, in *The Advanced Music System* Rainbird have still managed to produce a popular and much appreciated package.

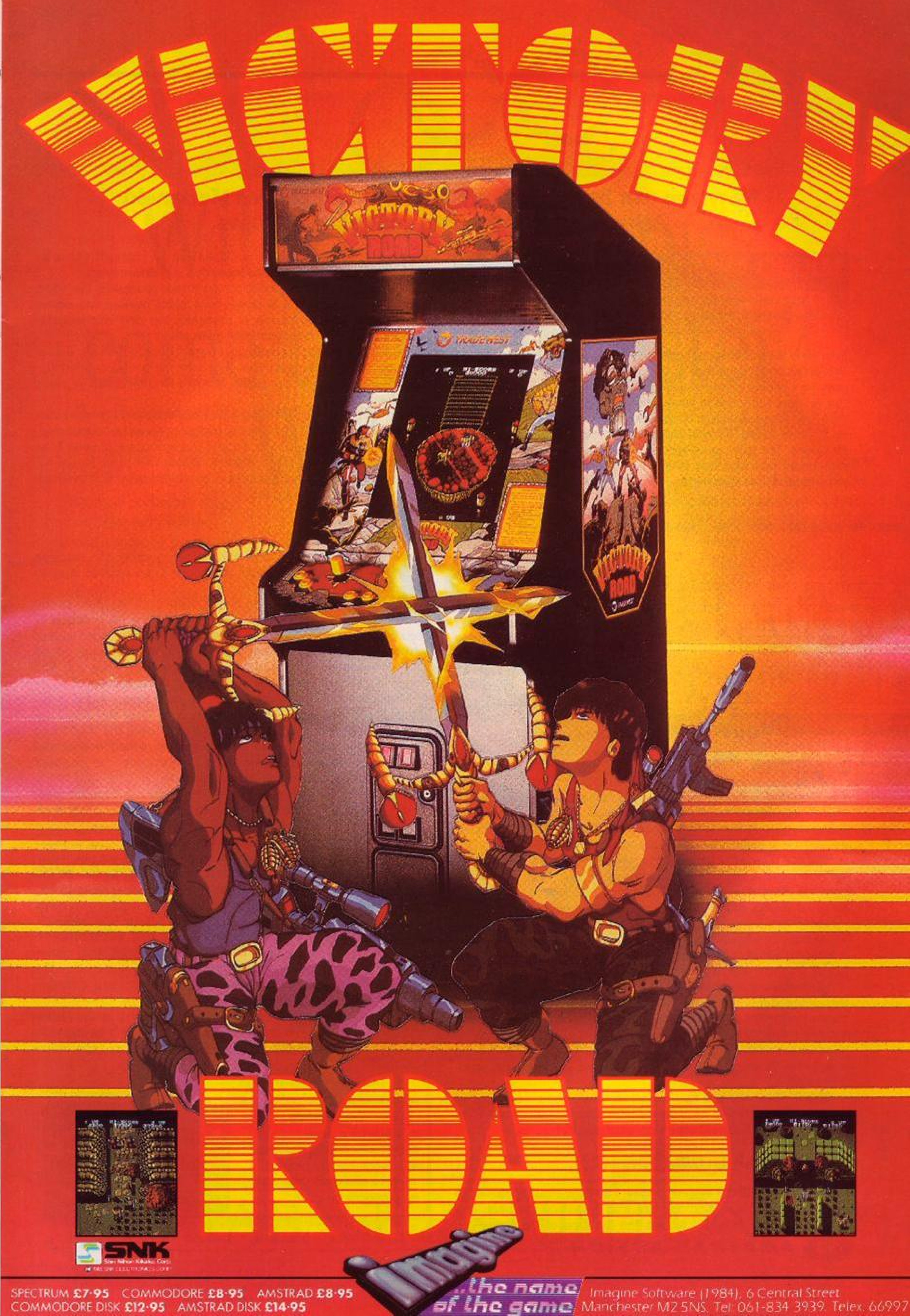
Scot Allan MacBain, 23, bought his about nine months ago. Even though his job as an Assistant Scientific Officer in the Civil Service doesn't allow him much time for such things, he's been putting musical scores onto CPC and adding the words underneath. He's a guitar player, and appreciates the opportunity this allows him to hear what songs *should* sound like.



'It needs getting used to', he says, 'but after two or three weeks you're away. Of course with only three channels you're never going to get great sound from the CPC, but that's a limitation you just learn to live with'.

And Ben Nugent, 11, whose instrument is the piano, is happy copying music onto computer, even if it is time consuming. He's still using it quite frequently after a year, and reckons anything that you're still using after that length of time must have something going for it!

Apologies to all those who sent photos, many of which were held up by the postal dispute. And perhaps the gentleman who sent in two large black and white photos in an envelope postmarked Ruislip might write and tell us who he is...


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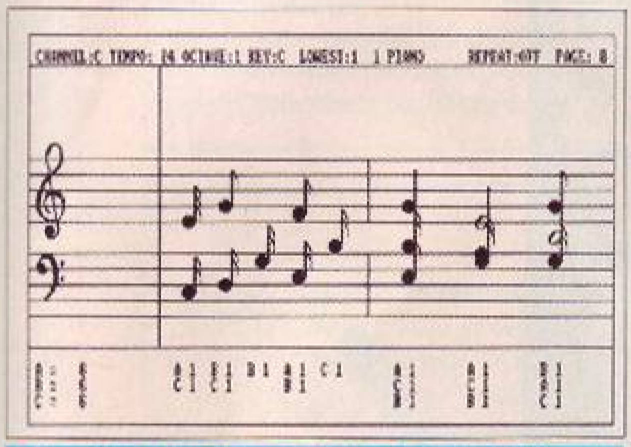
Now you can be in harmony with your CPC – Pat McDonald takes centre stage and conducts a review

MICRO MUSIC CREATOR

First Byte Software ● £9.95 tape, £14.95 disk, £24.95 ROM
71 Barn Glebe, Trowbridge, Wilts. BA14 7J2 ☎ 0225 765086

First Byte Software is one of those low key, low budget operations that occasionally advertise in the *AA Small Ads*. That sort of pedigree isn't widely regarded as a hallmark of brilliance, so the question is: does this product have anything going for it?

Micro Music claims to let you compose your own pieces using up to three voices. All well and good – other programs have similar claims. But this one is special, in that you can play back your tune under interrupt, that is as a background task while you type in listings, write letters or whatever.



● If only you could hear this! *(If only we couldn't! – ed)*

That's not all, because a sound sampler or digitizer is included too. That's hardware and/or (as in this case) some software that can pick sounds up from a tape played into the computer, analyse it and then reproduce it at a later date. The sound can be changed around, speeded up or slowed down and even played backwards. Theory the for much so (think about it!).

In practice

The tape/disk/ROM has a colour label, rather than a handwritten scrawl. Documentation for the product – an A4 manual – is good, though it's a pity it's photocopied rather than printed. An amendment sheet is included as well – tut tut!

You are presented with a menu of options featuring the above two functions, a sampled demonstration, a 'free' game and a help program. Selection is by number, and your Amstrad mumbles, shouts, squeaks, grunts or says that number when you press it.

Using the 'Compozer' (why spelt wrong?) is easy. I tried the usual test of attempting to use it without reading the manual, and it was a piece of cake compared to some of the other music programs around – a big achievement given its complexity.

Graphically you are presented with a central stave area, and a status line above and below. The top one reads: `Channel` (A to C), `Tempo` (value from 2-100), `Octave`, `Lowest` (note), `Piano` (which envelope selected), `Repeat` (On/Off), and `Page` (no.). The lowest window keeps track of the number of notes used in each channel – up to 500 in each – and indicates each note's channel and envelope value.

The musical stave is full height, so music can be transcribed across four octaves. Note values range from demisemiquaver to semibreve, which should cope with most musical pieces.

Dah dah dah DUMM

Putting music into the system is easy. The cursor can be moved to any part of the stave, and you use it to decide on the pitch of a note. Numerical keys 1-6 dictate the duration of the note. The channel in which the notes is played can be changed either by using the numerical keypad or through a pull-down-menu.

Micro Music automatically scrolls when you reach the edge, and a faint shadow line is drawn to indicate overlapping pages. All bar lines have to be put in manually, but that will probably come in useful for irregular time signatures.

Envelopes can be edited and swapped around within a sub-program of the Compozer. This section is not well documented – understandable given the pages devoted to the subject in every CPC user manual.

For someone who's virtually tone-deaf, like me *(I'll second that – ed)*, the program is informative. Certainly it can be used for ad-hoc education on the subject. I doubt if it will prove as popular as Rainbird's *Advanced Music System*, which can print pages out and has more features in general – but then again, that program doesn't have a sound sampler.

Singing CPC

The ROM version has a small idiosyncrasy – when the machine starts up, a sample of a manic laugh plays. An original start to anyone's working day...

The onscreen design is up to the same high standard of the rest of the page. The top part has two menus: when a sample is recorded, it is displayed in the middle/lower section as a series of vertical lines, apparently drawn at random. After messing about with the package for a while, it dawned that the start and end points of a sample were fairly easy to work out from this.

Using the package is so simple I'm only giving it one paragraph. First, you record a sound onto a tape. Then you select the `Record` option, and play the tape. Your CPC reads the sound into memory. After that you can edit where the sound begins and ends, change its speed and even play it backwards. The playback option can be used to check it's all going well. Sample standard is a bit hit and miss, and you'll need to experiment with sound level to get the clearest results. Permanently storing the sample on tape or disk is a cinch.

So what can you do with these weird and wonderful sounds? The manual explains how to play them from within your own programs, and your next version of Pac Man will knock spots off the competition – you can really hear the munching and gobbling noises... As an example, the 'free' game, *Empty Tummy*, is a really worthwhile little maze game, made special by the samples. Similarly, including musical compositions to play within a game (under interrupt!) is also well detailed in the manual. That makes *Micro Music* attractive to programmers – it's the one feature the competition, including *AMS*, lacks. For professional music composition, however, I'd still recommend the Rainbird package.

Most of the Amstrad owning population should go for *Micro Music Creator*. It's user-friendly, fast, has a large note capacity and the ability to sample. But above all it's a damn sight easier (and more fun!) to use.

GOOD NEWS	BAD NEWS
■ Value for money. ■ Sampler and free game. ■ Sounds can be played while doing another task. ■ Available on ROM.	■ 'Compozer' lacks some features.

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The complete Z80 machine code tool-pack, according to hack P. McD.

Z-PACK

Zenith Software ● £10.95 disk ● All CPC's ● 11 Bude St, Appledore, Bideford, North Devon EX39 1PS

Sharper readers may have noticed a few ads for *Z-Pack* in *AA* over the past few months. Zenith is a small company based in out-of-the-way Bideford – but they could be going a long way, judging by *Z-Pack*, a new product aimed at the more serious enthusiast. It's a toolkit for examining the routines hidden away in machine code programs, and could well prove popular among those many people who enjoy hacking for fun and for *Cheat Mode*.

On the disk are two slightly different versions – one suitable for 64K machines, the other containing more features to explore the extra memory of a 128K machine. Enclosed with the disk is a small, A5 manual, printed rather than photocopied. Well written and informative, it explains well just what you get for your eleven quid.

```
&CB92  20 66    f   JR   NZ,&CBFA
&CB94  72       r   LD   (HL),D
&CB95  65       e   LD   H,L
&CB96  65       e   LD   H,L
&CB97  97       .   SUB  A
&CB98  FF       .   RST  7
&CB99  80       .   ADD  A,B
&CB9A  42       B   LD   B,D
&CB9B  61       a   LD   H,C
&CB9C  64       d   LD   H,H
&CB9D  20 63     c  JR   NZ,&CCB2
&CB9F  6F       o   LD   L,A
```

● Taking a quick peek at the disk ROM

The memory of an editor

When you run *Z-Pack*, you are taken to the first option, `Memory Editor`. A bewildering array of information is placed onto the screen. Time to get the manual out to decipher it all... In a memory editor (we've printed some in *AA*) you have a pointer that indicates a particular byte in memory. Onscreen a list of the bytes is displayed, generally in Ascii as well as hexadecimal. Using the cursor keys increases or decreases the memory pointer, and the screen display scrolls to show the new memory locations.

Typing with the numbers 0-9 or the letters A-F (upper or lower case) alters the contents of the byte which the memory pointer is looking at. The memory pointer is automatically incremented, so that typing large amounts of data can be done at a fair old speed.

Using it is easy: you just scroll around looking for a likely piece of code. Ascii messages are easily seen, so changing program start up messages, high score tables and similar data is pretty simple. For the technical, pressing the `CLR` key toggles between interpreting bit 7 of the data and ignoring it. Similarly, `TAB` lets you alter the Ascii interpretation of the memory as opposed to the default hex.

Running across the top of the screen are some useful tidbits about the program. (If you're not into assembler they won't mean very much, and can safely be ignored.) First there's the version (64/128), update number and the address of the memory pointer. Next comes the byte's contents in hex and binary values, and then the address made by combining the present byte with the next byte in standard 'lo-hi' format, displayed in hex and decimal.

Once you have found some code to look at, the `disassemble` option is ready and waiting for you to start looking at it. The options available with this function are good: you can `Semi to screen`, which means disassemble to an onscreen window, `Full to screen`, where you use the whole display for disassembly, `Block to printer` and `Block to disk`, where a file is sent to the relevant device. In the latter case, this could enable you to load the source code into an assembler – necessary for larger scale changes to code.

Actually marking a block out for the two previous features is no hassle. All you have to do is go to the start of where you wish to mark, press a key, then go to the end and press a key.

Of final note in the league of major features is the ROM/RAM selection. The lower ROM can be switched on and off, as can any of the upper ROM's, from 0-251. (If anyone actually has 251 upper ROMs connected, we would be delighted to hear from you. Four megabytes is, as we technical bods say, *a fair old bit of memory*.) If you have extra RAM banks these can be paged in on the 128K edition, and the screen base set to either the normal (49152) or lower (4000) setting. The manual's explanation of the extra memory, however, is disappointing.

While we're on the subject

More block commands to exploit are included, enabling you to `Alter` a series of bytes in a similar way, for instance dividing them by two or ANDing them with a bit mask. You can also `Move` blocks of memory around.

`Searching` for a given set of bytes is also possible, though it's a bit of a bind – the program defaults to hex, and Ascii characters must be preceded by a dollar sign.

Finally there are the `Print/Save` blocks, which behave much as the `DisAssemble` functions. They deal with bytes rather than assembly instructions however.

Leftovers

Other commands have been included to help you control and understand *Z-Pack* better, including a help page, the ability to access nearly all the Amsdos commands (exception=`USER`), start execution of a machine code program, set the memory pointer without endlessly scrolling the text, and so on. Breakpoints are also implemented, although they are not conditional.

Most interesting among these is a rather nifty hex calculator. How often, when machine code programming, do you reach for a pencil and paper to do a quick sum? Not only can *Z-Pack* add, subtract, divide and multiply but it can also perform logical operations – `OR`, `AND` and `XOR`. The answer is displayed in hex, decimal and binary. This function is genuinely useful, and it's the first time I've seen it in a disassembler.

Without doubt this is one of the best disassemblers around. The screen update is fast, the disassembler can scroll up as well as down and the calculator saves messing about. *Z-Pack* lacks conditional breakpoints, however, which can be vital, and it takes a lot of memory – around 10K. It can't break into machine code on its own – other programs must be written or bought for that. Any chance of a ROM or *Multiface* version, Zenith?

GOOD NEWS	BAD NEWS
■ Fast, easy to use, soundly priced and good manual.	■ Non-conditional breakpoints. ■ Breaking into programs is your own problem.

WORDS WORK

Pat McDonald celebrates the timely end to the postal dispute

What's that familiar shape striding through the morning gloom? Can it be, yes it is, a postie! Carrying a huge sack, wow hasn't Christmas come early this year. One problem – all the letters are marked* Words Work. *In the absence of anyone of that name, I suppose I'd better open them...

Enquiry

Have you ever reviewed *Microfile/ Microword* in your magazine? They came as part of the package when I bought my CPC6128 and I wondered how it compared with other word-processors and databases. Looking back through my old magazines I can only find one mention of it in a reader's letter.

I am new to computing (no printer to try them on until the end of the month) but I found both programs reasonably easy to use, and I would like a spelling checker that would work with it. Do you know of one? Or would I be better off buying a new system?

Margaret Hague, Rotherham

We reviewed Microfile in AA9. In short, it stated that the program was good from a beginner's point of view. It had a well written manual and was quite easy to use. It lacked sophistication, but was a good starting point. I'm unsure whether that is the same as what you are referring to – it was by Cornix software.

Prospell, *the spell checker from* Arnor *(☎ 0733 239011) costs £24.95 on disk or £34.95 on ROM chip, and works well with most word-processors.*

Inspiration

For months, since I got my Copal SC-1000 printer (secondhand and without instructions), I've tried to fathom out how to do underlining. I guess the machine is capable as it has the sophistication of proportional spacing so surely must have the everyday 'common-or-garden' underline! I've tried all codes with no luck at all.

Suddenly I've hit upon an alternative successful idea. Sending `27 51 x` sets the line spacing to `x`/216 of an inch. I tried sending zero, and – you've guessed – the print head stayed where it was. I can then send the usual underline character (you know: shifted 0) as the next line. It works a treat. Then use `27 51 36` to revert to normal. The same trick can be used for double strike by holding the line spacing and repeating the same line of data.

It's a relatively simple matter to alter word-processor printer control codes – two are necessary for the above. In *Tasword* go to the `Customize program` option, and reply `Y` when it asks if you want to change the printer control codes.

Great stuff for a beginner, eh? Of course, if anyone can out there can supply the genuine codes for the Copal, that would be better still.

Jeff Ison, London

C'mon everybody!

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Write on

The cheapest printer on the market is the Citizen 120D, which I used for 18 months or so until I moved upwards (?). It is quite fast, printing a packed page of text of 4000 characters or so at a measured 19 cps in pica and 21 in elite. It boasts a good range of facilities: IBM characters, 8 bit control codes to use them, double height and reverse print, auto-feed for single sheet and a very good handbook. It costs around £140, including VAT – but you'll have to look hard for them.

The only sour note is the NLQ, which at least *is* better than the DMP2000/3000. (*Then again, there's not a lot that isn't – Pat.*)

Of the 24-pin machines, the NEC P2200 is worth investigating.

Compared with the Amstrad LQ3500, it is faster, has better print quality, more facilities, is easier to use and has a much better handbook. At around £350, it sells at much the same price as the Amstrad.

I strongly advise anyone buying a printer to shop around and, most importantly, try one running in a shop. Run a page of text through it and time the result. The effective speed of many printers is much less than claimed, and I encountered one which ran at little more than half its alleged speed. Check from the handbook, or better still by running test pieces through it.

Also check the facilities it has and whether they work in NLQ as well as draft. Quite often they don't. If you're looking at an LC10, do make sure that it works with the CPC – some earlier ones didn't.

If the printer can recognise the eighth bit toggle codes, as most do, there is little need for the KDS port. I have been producing the IBM characters for the past two years or so without any need for it. The device is valuable when data is being sent to the printer, rather than characters.

One instance is in redefining character shapes. With the standard CPC, only the bottom seven characters can be defined. Using an 8 bit printer port all of the top eight bits and the bottom one can be selected. (That's why redefined characters with only seven bits appear two rows below normal text.)

However, 8 bit printer ports come into their own when used with print enhancers (such as *Qualitas*). The reason for this is that such products (and screen dumping programs as well) use graphics, which are unaffected by the eighth bit toggle.

M Catton, Gosport

That's one reason why I don't like the Citizen 120D. The graphics commands are none-standard: many readers write in asking for special screen dump programs. Unfortunately they never give details of their printer's graphic codes...

Mind you, from a word processing point of view, it's an acceptable printer.

That's the way you do it

In September's *Reaction*, R. Corbett seemed to have a problem with his *Tasword 464*. Your answer, unfortunately, was incorrect. It is nothing to do with the 6128's memory; it's the disk drive. I had this same problem with my *Amsword* when I purchased the DDI-1 disk drive and tried to transfer it to disk. When the Basic program loaded into memory, it came across the `|DISC` command in line 130 and switched to disk operation, then tried to load the `TASWORD.BIN` plus `AMSWORD.BIN` programs from disk. There are no files with this name on the disk, so it comes up with the error.

The answer is to load the Basic loader and delete the `|DISC` command (you could `REM` it if you have Basic 1.1 but the 464 will not allow you to use a RSX within a `REM` statement), and then run it. When the machine code is loaded and run, return to Basic, add the `|disc` command back again, type RUN, and select 'SAVE Tasword (or SAVE Amsword)' – it should save to disk.

By the way, *Tasword 464* does run on the 6128, although it does not use the extra 64K available. If you want to upgrade to *Tasword 6128* from *Tasword 464*, then send Tasman £13.90, plus your *Tasword 464/Amsword* tape. They will return the tape, together with *Tasword 6128*.

As I'm in such a generous mood, I feel that I can help Stephen Godrich with his disk drive. I had exactly the same problem – although it was all my own fault. Playing with the sector editor given away free with the Christmas cover tape, I discovered how to copy sectors from one disk to another. So I did this with my free copy of *Matchday II* from your subsnption offer – I copied the bootstrap program (Track &090, Sector 41) onto a blank vendor disk.

Then, being such an idiot, I ran this (by typing `|CPM`) and my drive made the most horrendous noise. After that it wouldn't load anything. As you may have guessed I was not too pleased since I had bought it just two weeks before!

Now this is the good part – how I recovered the drive! I put a CP/M 2.2 system disk into the drive and typed `|CPM` – the motor started but nothing else happened. So I hit the top of the drive with my wrist. Suddenly it worked! It wasn't just the drive ether – I did it twice! Don't ask me how it works – I don't know!

Could you help me on one small point? I bought the VDE 2.31 text editor from WACCI. AS you may know it is configured to run from CPM+, but the `VDE.DOC` tells me that it will run under CP/M 2.2.

Using VINST23, I have made it run reasonably but I can't find the codes for 'Scroll up a line' and 'Scroll down a line' for the CP/M 2.2 operating system – it's not in the DDI-1 disk drive manual.

Martin Bullivant, Altrincham

Sounds like you may have worked a screw loose somewhere in the drive. I remember having to tighten a screw on the external drive occasionally: vibration loosens it regularly.

AA CASSETTE UPDATE

Tan Kwong Peng of Singapore contributed a rather useful disk formatter program, which could restore disks with bad sectors to full health, to last month's cover tape. The tape was of course tested before being sent to the duplicators. The program consisted of a helpfile, a Basic program file and a machine code program that was used to do clever things to the disk operating system.

The three filenames were: `FORMHELP.BAS`, `FORMPROG.BAS` and `FV.BIN`. Unfortunately, on some copies of the tape the last one was saved by the duplicators onto a tape master using:–

`SAVE "FV.BIN,B,&8000,&(110`:filename length truncated it.)

Instead of: `SAVE "FV.BIN",B,&A000,&110`. This has resulted in the Basic program `FORMPROG.BAS` being saved again.Bit of a mess up, in fact, and while it was the duplicator's fault we still feel bad about it.

So what can you do?

What you can do

Either: type in this program, and save it onto the tape at the point where the bad file begins. **Or**: send it to **Interceptor Ltd, Mercury House, Calleva Park, Aldermaston, Berks RE7 4QV** and have it replaced. **But please please *please* remember to include your name and address so we know who to return it to!** We've already had some people destined to be disappointed because they omitted to let us have this vital bit of information.

```
10 n=0:chk=0:l=1000:MODE 2:PRINT"Please Wait":
   PRINT:PRINT
20 FOR i=&8000 TO &810F
30 READ a$:j=VAL("&"+a$):POKE i,j
40 n=n+1:chk=chk+j
50 IF n=16 THEN n=0:READ amount:IF chk<>amount
   THEN PRINT"Whoops! Error in data line";l:END
   ELSE IF n=0 THEN chk=0:l=l+10
60 NEXT i
65 PRINT"Insert disc to save binary file and press
   any key":PRINT:PRINT:CALL &BB18
70 SAVE"fv.bin",b,&8000,&110
80 PRINT"Binary file saved":PRINT
1000 DATA E,7,CD,F,B9,3E,4,CD,3,C6,3E,FF,CD,72,CA
     ,CD,&795
1010 DATA 18,B9,C9,E,7,CD,F,B9,C5,21,36,80,16,0,1E
     ,1,&515
1020 DATA E5,6,9,72,23,23,23,23,10,F9,E1,CD,52,C6
     ,D4,B7,&74C
1030 DATA 80,C1,CD,18,B9,C9,0,0,C1,2,0,0,C6,2,0,0
     ,&533
1040 DATA C2,2,0,0,C7,2,0,0,C3,2,0,0,C8,2,0,0
     ,&31C
1050 DATA C4,2,0,0,C9,2,0,0,C5,2,E,7,CD,F,B9,C5
     ,&4C7
1060 DATA 1E,1,16,29,E,C1,CD,74,80,C,79,FE,CA,20
     ,F7,C1,&713
1070 DATA CD,18,B9,C9,2A,0,60,23,22,0,60,21,0,40
     ,CD,66,&52A
1080 DATA C6,C8,D5,ED,5B,0,60,2A,0,66,73,23,72,23
     ,22,0,&5E8
1090 DATA 66,D1,C9,E,7,CD,F,B9,C5,21,0,40,11,1,0
     ,E,&4F0
1100 DATA C1,CD,4E,C6,C1,CD,18,B9,C9,21,0,50,11,1
     ,50,1,&69E
1110 DATA 0,18,36,0,ED,B0,C9,3E,2,CD,E,BC,21,B,9
     ,CD,&58D
1120 DATA 75,BB,21,D4,80,6,3C,7E,CD,5A,BB,23,10,
     F9,CD,18,&758
1130 DATA BB,C3,0,0,44,69,73,63,20,6D,69,73,73,69
     ,6E,67,&61B
1140 DATA 2F,70,72,6F,74,65,63,74,65,64,2C,20,50
     ,72,65,73,&5DF
1150 DATA 73,20,61,6E,79,20,6B,65,79,20,74,6F,20
     ,72,65,73,&5B1
1160 DATA 65,74,20,61,6E,64,20,72,75,6E,20,61,67
     ,61,69,6E,&5C1
```

BAR CPM

First Steps – part three with Richard Monteiro

Winners of Graduate's goodies will be announced next month. Due to the postal strike the competition entries have only just started to arrive. So come on, you have several more weeks to write your name and address on a postcard or back of an envelope and send it to: ***Richard Monteiro's Bar CPM on ROM, Amstrad Action,* 4 Queen Street, Bath, BA1 1EJ.**

What do you mean you didn't read the October issue (ahem, September mark II *(yes, OK Monteiro – ed)*) of *Bar CPM* and haven't a clue what we are talking about? What were you doing? The prizes on offer are 10 vouchers worth £5 off any of Graduate's products and a totally sponditious copy of CPM on ROM.

DIR
Catalogues a disk. All filenames are displayed except those marked with a SYS attribute.
DIRSYS*
Displays filenames with SYS attribute.
ERA+
Erases a given file or sequence of files from disk.
REN-
Allows you to change the name of a file.
TYPE
Renders the contents of an Ascii file on your screen.
USER
Changes the active user area.

* CPM Plus only.
\+ CPM Plus version is ERASE
\- CPM Plus version is RENAME

DIR is just scraping the surface of CPM's built-in commands. There are five (six in CPM Plus) so-called built-in commands. Many other transient commands exist. Transient commands reside on the system disk and are loaded in and executed when needed. Built-in commands are part of CPM and are always available for your use regardless of which disk you have in the drive. Built-in commands reside in memory as part of CPM and consequently execute faster than transient commands.

Those are the built-in CPM commands. Get used to them: you're going to hear a lot more about them.

We've done **DIR** to death, so moving down the list we have **DIRSYS**. (This command isn't available to CPM 2.2 users, but the transient command **STAT** is. This allows you to do everything **DIRSYS** manages plus a whole lot more.) Most built-in CPM Plus commands can be abbreviated to the first three characters – four in **DIRSYS**'s case.

Typing **DIRSYS**, or **DIRS**, at the **A>** prompt causes the computer to display all files tagged with the SYS attribute. These files are normally hidden to the standard system and aren't shown when **DIR** (or even Basic's CAT) is issued.

ERA next. To use this command you have to copy your CPM system disk. CPM Plus users use **DISCKIT3**. 2.2 fans use **DISCCOPY** (if you have two drives then use **COPYDISK**). Full instructions for copying disks are in the User Instructions – check them out before doing anything.

Put the copied CPM system disk in the drive and start CPM. ***What you are about to do is irreversible. Make sure you are using a backup of your system disk!*** Type **DIR** at the prompt and hit Return. You should see a display of all the files on the disk. You're going to get rid of some of them. **ERA** does the job: it erases files. Be warned: once files have been erased you can't get them back. CPM 2.2 users enter **ERA AMSDOS.COM** and press Return. CPM Plus users enter **ERA SAVE.COM** and press Return.

Now type **DIR**, and you find that the files have gone – for good!

Line-editing control characters

Anything entered after the A> prompt is known as a command line. Using Control-plus-key sequences it is possible to perform time-saving edits on the information entered after the prompt. For instance, the cursor can be moved left or right through the line, characters to the left of the cursor can be deleted, the previous command can be recalled and so on. CPM Plus naturally has many more of these short-cuts. These sequences are guaranteed to be on every version of 2.2 or Plus on any micro; keys other than the QWERTY standard are not.

Here is what's available:

Key sequence	Effect
Control-A*	Moves the cursor one position to the left.
Control-B*	Places cursor at the beginning of the line without effecting the contents of the line. Cursor is moved to the end of the line if it was originally at the beginning.
Control-C	Special one this. It is used to log-on new disks. Particularly important in CPM 2.2. If this operation isn't carried out once a new disk has been inserted, 2.2 can get very confused. Also used for breaking out of programs or transient commands.
Control-E	Forces a carriage return, but does not inform CPM. Sneaky.
Control-F*	Moves the cursor one character to the right.
Control-G*	Deletes the character under the cursor.
Control-H	Erases a character and moves the cursor left by one position.
Control-I	Places the cursor at the next tab stop.
Control-J	Has the same effect as Return (Enter) or Control-M.
Control-K*	Deletes to the end of the line from the cursor.
Control-M	Return.
Control-R	Places a hash at the current cursor location, moves the cursor to the next line and redisplays any text typed in so far.
Control-U	Discards all characters in the command line, places a hash at the current cursor position and moves the cursor to the next line.
Control-W*	Recalls the previously entered command.
Control-X	Discards all characters to the left of the cursor and moves the cursor to the beginning of the line.

*** Not available for CPM 2.2 line-editing, although other software may use the key sequences described here.**

Well, that's more than enough drama for one month. Drop in next issue when you'll find out how to erase lots of files in one go. And also how to change file names. Can you wait?

AA helpline

Bards Tale tips, maps, characters (supply a disk), etc... Send 50p for p&p on eurocheque
Mark Rison, 7 Chemin des Columbettes Apt 11, CH - 1202 Geneva, Switzerland

17yo, Hertfordshire, to team up for machine code programming/assembler language, 464, graphics
Carl Jeffreys, 71 Aston Rd, Stanton, Nr Ware, Herts SG11 1PZ ☎ Ware 821038

Help on Super Stunt Man, Reflex, Arkanoid 2, Thing on a Spring
Haydn Hughes ☎ 09073 5516

Bionic Commando, Mask, Ghostbusters, Dan Dare, Green Beret, Shaolin's Road, Jail Break, Mikie, Jack the Nipper 2, Nemesis, Hyper Sports, Jackal, Ping Pong
Martin Grover, 11 The Croft, Lower Dicker, Hailsham, East Sussex BN27 4BS

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Craig Haynes, 33 Coates Avenue, NPE Leicester LE3 9HX

Loads of games – eg Renegade, Target Renegade, Mickey Mouse, Barbarian, Beyond the Ice Palace. Lots of tips
Stuart Locock, 70 Scott Close, Lichfield, Staffs WS14 9DB

Pokes, tips and maps for hundreds of games. Send SAE + 25p per game you want help with.
John Lumbus, 62 Hood Avenue, Southgate, London N14 4QQ

Printer listings 10p disk, 15p tape. Basic debugged with free listing of program 50p disk, 60p tape. Please send outline of program function and when error occurs. Name everything you send!
Jamie Ogden, 22 Maynard Rd, Hemel Hempstead, HP2 4TR

Machine code, sprites, listing any Basic file, Basic programs, eating Amsoft games *(shome mishtake shurely – ed.)*
Michael Gledhill, 21 Newtake Rd, Whitchurch, Tavistock, Devon PL19 9BX

Pierre Duez of Mons! Contact **Andrew Cope, 9 Church Drive, Ross-on-Sea, Colwyn Bay, Clwyd, LL28 4LL.** He owes you a disk

Mark Andersen! Contact **Sergio Dunkley (62 Rainbow Drive, Melling, Liverpool L31 1BZ)**, because he's lost your address and wants to send promised item

Basic, machine code, RSXs, debugging of Basic and machine code at 15p per page, hacking, firmware routines and business programs
Paul Wilton, 'Woodlands', Village Rd, Waverton, Chester CH3 7QT

No David, I haven't forgotten to take your name out. Thanks for your kind remarks and all the best for the future. Regards, Steve.
David Howlett, 53 St Marys Avenue, Alverstoke, Gosport, Hants, PO12 2HU

Basic and machine code programming, de-bugging programs (send tape/disk. Enclose assembly listing if machine code)
David Jameson, 14 Glenview Avenue, Belfast, N. Ireland BT5 7LZ

De-bugging Basic programs, basic listing at 50p E/A
Tom Daffin, Crawley Farm House, South Brewham, Near Bruton, Somerset, BA10 0LB

Programming in basic (mostly utilities), Protext, Toolkit (Beebugsoft), DMP 2000, Utopia, Printmaster, listings 15p (draft) or 30p (NLQ), Artwork (Kuma), tape only.
Matthew Cawley, 42 Hamilton Av, Sandycroft, Deeside, Clwyd, CH5 2PB

Lots of games, far too long a list to print.
TP Cheung, 771 Woodbridge Road, Ipswich, Suffolk, IP4 4NE

Stormbringer, Eagles Nest, Indiana Jones, Short Circuit, Curse of Sherwood, Shard of Inovar, Batty, Lightforce, Lord of the Rings, Worm in Paradise, Venom, some hacking.
Nicholas Roach, 5 Hintlesham Close, Stowmarket, Suffolk ☎ 0449 674848

Enduro Racer, Bombjack 1 and 2, Yie ar Kung Fu, Buggy Boy, basic programming.
Alex Kelly, 113 Potter Street, Northwood Middex, HA6 1QF

Send me your program and a blank tape and I'll draw a professional looking loading screen for you. Please enclose description of software. CPC 464 only.
Andy Van-Kerro, 42 The Avenue, Ramsey, Huntingdon, Cambs, PE17 1AU. ☎ 0487 813194 10am-10pm

3 Weeks in Paradise, Renegade, Knight Tyme, Ninja, Flash Gordon, Grand Prix Simulator, Ghosts and Goblins, Yie ar Kung Fu.
Mark Warriner, 92 Whitfield Avenue, Pickering, N.Yorks, YO18 7HY

Cobra, Yie ar Kung Fu, Green Beret, Bruce Lee, Rambo, Ghostbusters, Gauntlet, Gauntlet II, Mission Genocide, Chronos, Ninja, Trantor, word processor writing.
Andrew Given, 83 Dickson Street, Edinburgh EH6 8QH. ☎ 031 554 5001, call after 5pm.

Basic (including graphics and sound), short machine code routines, penpals computer matched.
Thomas Reader, 6 North Street, Stilton, Peterborough, PE7 3RP

Basic programming, debugging basic programs, typo in listings, print listings for 50p.
Neil Selwyn, Highfield, Coombe Keynes, Near Wareham, Dorset, BH20 5PS

French games (Les dieux de la mer, Forteresse, Bob Winner, Asphalt, Manhattan gs, Prohibition, Bivouac, etc), Gauntlet II, Captain America, Combat School, California Games and lots of tips, pokes and maps.
David Higelin, 5 rue Paul Verlaine, 68200 Mulhouse

, Trantor, 3D Starstrike, Ikari Warriors, Sai Combat, 1942, Spindizzy, Three Weeks in Paradise, Who Dares Wins II, Screen Designer, listening in stereo
James Walker, The Lingfield Inn, Lingfield Drive, Moortown Leeps, West Yorkshire, LS17 7LE. ☎ 0532 697988

Basic Programming, Head over Heels, The Hobbit, Jet Set Willy, Barbarian, Gauntlet, Elite.
Martin White, Room C49, Alexandra House, 59 Imperial Road, Exmouth, Devon, EX8 1AU

Green Beret, Yie ar Kung Fu, Mikie, Hypersports, Cauldron II, Frost Byte, Dandy, Highway Encounter, Way of the Exploding Fist, Starion, Spindizzy, Who Dares Wins II, Zoids, Equinox, Antiriad, Druid, Sentinel, Space Harrier, Elite, Sorcery+,
David Parker, 14 South Drive, Brentwood, Essex, CM14 5DJ

Bulletin boards for CPC, comms, RS232, Modems, Setting up a bulletin board, Public Domain bulletin board software for CPC.
S Sandles, 81 Queens Road, New Tredegar, Gwent, NP2 6DZ. Merlin BBS (0443) 834179

Hints, tips, pokes on Pulsator, Renegade, Exolon, Rock n Wrestle, Get Dexter 1+2, Feud, Thrust, Arkanoid, Dizzy, GPSim, Xor, Sentinel, Def of the Crown, Millionaire, 180, Rocky Horror Show, Football Manager, Footballer of the Year, Starquake, Lords of Midnight, Match Day 1+2, and lots more.
Iain McKinnon, 37 Loch Laidon Street, Sandyhills Estate, Glasgow, G32 9HR

Batman, Ikari Warriors, Jack the Nipper, Rambo
Si Carter, 6 Laurel Grove, Hoole, Chester, CH2 3HU

Pokes and tips for most games. Basic programming, some machine coded debugging Basic listings.
Mark Hillier, 121 Eliot Bank, Forest Hill, London

Writing and using CPM software, 8080 and Z80 assembly language, any version of Basic, protection of data and programs, research development and programming of games and languages, Basic and MC graphics. Much more available, write for details.
Cormac McGaughey, 1 Glenariff Rd, Cushendall, Co Antrim, BT44 0QY

I have tips etc for Future Knight, Dan Dare, Ikari Warriors, Starglider, Short Circuit, Knight Tyme, Dizzy and more.
Dominic Keen, Church View, School Lane, Upton Snodsbury, Worcester WR7 4NH

Stop Press, Extra-Extra, Sorcery+, Ikari Warriors, Knight Lore, Barbarian, 1942, Who Dares Wins II, Bomb Jack, Bomb Jack II, Exolon, Prospell and the DMP 2000. I also have lots of pokes and maps.
Pal Kroger, Bergjevegen 62, N-4056 Tanager, Norway

Feeling helpful? Just send your name, address, phone number (say if you don't want it printed) and subjects on which you're offering help to: *Helpline*, Amstrad Action, 4 Queen Street, Bath, BA1 1EJ. Write on a postcard/back of a stuck down envelope and keep it short or you won't get in (or you'll get cut to 'loadsagames').

If you want help contact the appropriate Helpliner – not us. By post include a self-addressed, stamped envelope for the reply – or you won't get one. And phone only in decent hours!

Piracy is not welcome: don't try it, you'll get booted off. Keep it legal. And if you receive SAE's, for heaven's sake return them with some acknowledgement. If you want to come off *Helpline* write and say so.

HOT TIPS

Tips, get your tips here

Byte oversight

Thank you for publishing my tip in *AA36*, titled 'The great bank heist'.

Unfortunately there was one small error at the top of the second column. The four bytes to be typed into **&8000** should be

`00,80,8C,C0`

and not

`0,80,0C,C0`.

CL Naylar, Penparc

ROM not on

Recently I bought A DDI-1 disk drive for my 464. Within minutes of plugging it in to my Rombo romboard I found that when I typed CAT or some similar command the disk drive catalogue was corrupted. I tried cleaning the connectors – no luck. It got to the stage where the computer crashed if I tried to access an Amsdos format disk (I also have *Rodos*, which performed perfectly).

Eventually I had the idea that the signals from the disk ROM were somehow being corrupted by the rather old Rombo. So I carefully opened the disk interface and removed the disk ROM (marked AMSTRAD 40015) and refitted it into socket number seven in my Rombo. After reconnection the problem ceased. What bliss!

Matt Cawley, Deeside

Yes, it could have been caused by the Rombo, but a more likely explanation is that the DDI-1 Rom slot was either underpowered or had a dry solder joint somewhere.

Pot pourri

Some tips for the *Micro Music Creator* (reviewed in this very issue – we don't hang about here on *AA!*). To turn the 'music repeat' on or off, the manual quotes two rather obscure pokes. Contained within the ROM version are two RSX's that do the same job – these are |REPON and |REPOFF.

Do you want your GAC adventure to look like an Infocom one? It's quite simple – use embedded control codes. First, switch off graphics. At the beginning of the adventure, in the description of the first room, insert the following characters: CTRL-D, 2, (SPACE). You can use similar techniques for messages. Suppose you wanted to highlight a message. Put CTRL-X, your message and finally another CTRL-X. Try exploring the codes described in your manual for the various effects possible. (464 Ch9 P2, 664 + 6128 Ch7 P3).

When editing a program using the cursor keys, pressing CTRL as well moves the cursor to the very edge of the line in that direction.

James Pinto, Hook

Replacing Honeyview

The 32K ROM in the Amstrad RS232 interface occupies four ROM slots (that's what I call bad design). Many people find the *Honeyview* Viewdata emulator rather limited, and turn to the *Cage Comms ROM* instead. If you want to keep on using *Honeyterm* for scrolling services, you have to keep this 32K device plugged in, gobbling up four slots, because it won't fit into a conventional ROM board...

Well, for a start you can if you own a Rombo device, because pin 27 on that is connected to Vcc. This always selects the upper part of the ROM anyway, i.e. *Honeyterm*.

Problems arise when using a ROM board which leaves pin 27 unconnected to any voltage, such as the Britannia Super ROM plus. What you do is to get a 28 pin IC socket. Solder pin 27 to pin 28, using *as little solder as possible*. Make sure the connection is right up next to the plastic body. Now plug that into a ROM socket, and stick the Commstar ROM into the doctored socket. Use all the usual anti-static precautions while doing this.

When you switch the computer back on, the ROM will log on as `Commstar ROM 2`, and you can call up *Honeyterm* by typing |HT.

Mike Brown, Liverpool

Errors – what errols?

In AA36, *Type-Ins* printed my variable list. Soon afterwards I got a letter from someone who typed the proggy in to be confronted with `Type Mismatch`. He'd typed od instead of 0d. I sent him instructions to check for 0s and os in the data, which others may find useful when typing machine code data.

1 Enter SYMBOL AFTER 79. If the machine says `Improper argument`, cry, because you'll have to do it by hand.

2 Type `SYMBOL 79,170,85,170,85,170,85,170,85:SYMBOL 111,170,85,170,85,170,85,170,85`

3 List the data. Any 0s or os will be replaced by a graphic symbol of dots.

4 Alter the mistakes and type SYMBOL AFTER 240

Alternatively, before typing data type the following:

```
KEY 141,"Error":KEY DEF
34,1,141,141
```

Any os entered accidentALly will be printed as `Error`.

```
KEY DEF 34,1,111,79
```

The above will return to printing os.

M Gledhill, Tavistock

We welcome your contributions to *Hot Tips*, and the best published each month earn their author £20. So what are you waiting for?

Address your work to: *Hot Tips, Amstrad Action*, 4 Queen St, Bath, Avon, BA1 1EJ.

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ACTION TEST

And to review them – heeere's Gary!

We kick off with the CPC version of the second in the *Star Wars* series – and some bad news for Domark.

Raves this month include *The Train* and *Vindicator*. But what about Mastergame? There isn't one, that's what!

There are some neat compilations out (p. 49) and some genuine turkeys – but perhaps we should leave *you* to find them...

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THE EMPIRE STRIKES BACK

Domark ● £9.95 cass, £14.95 disk joystick/keys

Long ago, in the early years of the second age... (that doesn't sound right) ah yes... Long, long ago in a galaxy far, far away (that's better) there was a movie called *Star Wars* (OK, it was Earth 1977). The film did megabucks at the box office and subsequently, inevitably, there was a sequel, *The Empire Strikes Back*. Arcade games appeared of both films and furthermore *Star Wars* came out for the CPC, but not in that great a version. Now *The Empire Strikes Back* has arrived. Have they done a better job this time?

Most of the screen is taken up with a view through your cockpit and the rest is a status area. The evil forces of the Empire are viewed in 3D vector graphics as they attack. The status area has the number of shields, score, wave number and the number of enemies to shoot. You have five shields to begin with and death results when they disappear.

The sequence of events loosely follows the plot of the early part of the film. There are four stages: **probots, imperial walkers, tie fighter attack** and **the asteroid belt**. In the **probot stage** you have to stop a message reaching Darth Vader which informs him of the rebel bases location. To do this you have to blast the messages as they leave the probot, and destroy incoming fire and the probots themselves. Eventually the message does get through and it's time to **blast the walkers**. There are two sorts of walker: AT-ST's and AT-AT's. AT-ST's are small bipedal attack craft that are easy to destroy. AT-AT's are much bigger and more tricky, but you can fly through their legs for bonus points.

Stage three is a blast-the-tie-fighter sequence similar to the Death Star approach in *Star Wars* and the asteroid belt is a matter of dodging out of the way of the big rocks that hurtle towards you. If you complete a specific task in each stage you're awarded a JEDI letter and if you collect all four you become temporarily invulnerable to enemy fire.

There are three difficulty levels and a rebel instruction manual, which just gives you a bit of information on the enemy that you're about to face. The vector graphics move a little slowly and there's some flicker. Colour is not used very well either, there being only a handful on screen at any one time. Fast vector graphics are essential in a game of this type and unfortunately they're absent. A good tune plays throughout the game, but sound is simple and ineffective.



SECOND OPINION

"Here we go again, saving the universe by taking on some rather basic bad guys, who look like they come from an etch-a-sketch factory.

The problems with Empire *are that it has poor design, not enough stages, is too easy and occasionally crashes. Save your energy for a more intellectual pastime. Like fly swatting."* **PbM**

GREEN SCREEN VIEW: OK



● An AT-AT just inviting you fly through its legs

A couple of years ago this would have been a good game, but it looks dated badly. It's an improvement on *Star Wars*, but the lack of speed lets it down considerably, because fast reactions is what the *Star Wars* games are all about. What *will* they do with *Return of the Jedi*? **GBH**

FIRST DAY TARGET
Complete wave four

The Verdict

GRAPHICS 47%
- ■ Vector graphics are a little slow.
- ■ Some flicker too.

SONICS 58%
- □ Very good continuous tune.

GRAB FACTOR 55%
- □ Easy level to get you going.
- ■ Little variation from stage to stage: just the enemies change.

STAYING POWER 48%
- □ Three difficulty levels.
- ■ Too easy, even on hard.

AA RATING 51%
- ■ You'll get more fun hiring the video.



GAME OVER II

Dinamic ● £8.95 cass, £12.95 disk ● joystick/keys

Game Over was favourably reviewed in *AA25*, and now (with similarly subtle artwork – why is the software industry so sexist?) here comes the sequel. As a bonus – and a substantial one at that – you get *Game Over* free.

At the end of *Game Over*, devotees may recall, the hero Arkos had defeated the evil Gremla and there were wild parties everywhere that lasted as late as, ooh, half past seven. Unfortunately in the



● Approaching Phantis

general merry-making the hero was forgotten about and when no-one was looking he was captured by Gremla's heirs. Poor old Arkos was shipped off to the terrible prison planet of Phantis and shoved into a deep, dark dungeon to rot. Letting the hero die is not really on, however, and a rescue mission is launched by yet another hero (go on, guess).



There are two different parts to the game, loaded separately, and a password – which you get by completing part one – is required to enter part two. Part one is divided into four phases: **approach, volcanic, underground** and **swamps**.

Bonus lives are awarded every 25,000 points and you're gonna need them to



● Low-flying magma

get far. In the approach to Phantis you encounter the suicidal hordes who fly and shoot at you, and they're definitely not aiming to miss. Asteroids are just as deadly, but like the enemy ships they can be blasted with some well aimed laser bolts.

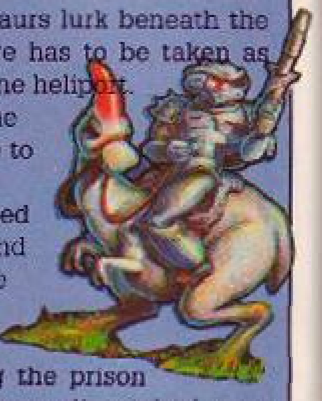
After flying along for a while you reach the area of volcanic activity in which balls of magma, bombers and missiles endeavour to destroy you and then reach the underground cavern and its snaky occupants. Three shots in the head are needed to brain the serpents. Phase four is just after landing in the swamp infested landscape. After capturing Adrec you can ride around stabbing at bad guys with your photonic blade and eventually you get the password to the second half of *Game Over*.

Now you have six levels to pass through before reaching the prison cell: **surface, alien base, underground forest, inner lake, magma** and **prison**. The planets surface is very mountainous and is occupied by some not so friendly aliens called the Pelotrones. They die with the aid of your own rebel Pelotrone. Once you're inside the alien base you have to take control of the Ionic turbo laser and its proton loader to arm you to full power. Hidden in the underground forest is a



● Riding on your Adrec

medallion which you need to open the Blue door that leads into the inner lake. Piranhas and dinosaurs lurk beneath the hot waters and care has to be taken as you head towards the heliport.



Once inside the helicopter you have to fly through a hazardous cavern filled with molten rock and you finally reach the prison level. Some little devils are guarding the prison and once they've been dispatched your mission's over.

The Verdict

GRAPHICS 65%
- Smooth horizontal scrolling.
- A bit too blue.

SONICS 56%
- Reasonable title tune.
- Tinny effects.

GRAB FACTOR 69%
- Too difficult at first.
- Free copy of *Game Over* on the flip side.

STAYING POWER 63%
- Two parts to each of two games.
- Not that difficult to complete with practice.

AA RATING 69%
- Great value if you haven't got *Game Over*...
- And still pretty good if you have.

SECOND OPINION

"Some really nifty graphics on this one, really mean for the CPC. The gameplay is pretty frantic at first: you'll need a good joystick. Far too easy though. More! More!". **Pbm**

GREEN SCREEN VIEW:
Bad choice of colours makes things tricky to see

A pleasant little tune (if a bit tinny) plays on the title screen, but there isn't one during the game itself. Sound effects are alright, though they too are a bit on the tinny side. Horizontal scrolling is fine and there's plenty of colour, although a large portion of it is blue. Green screen players, may have occasional problems seeing things.

Game Over was fun shoot-em-up, and this is a good game too. Getti 'ccng the original and a sequel makes it good value for money if you haven't already got *Game Over*, and it's not so bad on its own anyway. My only doubt is the difficulty factor: your first few games will be short lived, but it doesn't take long to get to the end of the first part of the game. Worth a look, without a doubt. **GBH**

FIRST DAY TARGET:
Complete part one



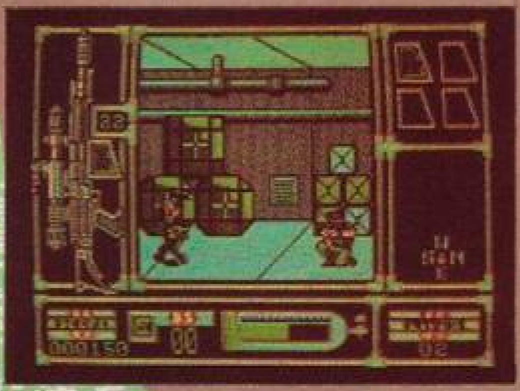
VINDICATOR

Imagine ● £8.95 cass, £14.95 disk ● joystick/keys

AA RAVE


● The computer room

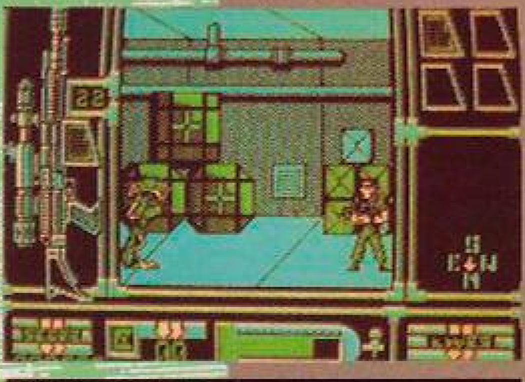
A poor defenceless insignificant little planet, known as Earth (what a dull name!) is yet again under attack from hostile alien forces. You, the Vindicator, sand between alien domination and victory for the Earth. You've managed to infiltrate the alien fortress and now all you have to do is to find the hidden bomb components and blow the aliens into little pieces.


● A stupid alien...

In the centre of the screen is the playing area with various other bits around it. An oxy-gum indicator, your lives and score are at the bottom of the screen. On the left is a gun symbol with a figure to show how much ammunition is in it and to the right are your magazines, a display of objects carried and compass direction.

The bomb components are hidden within the four level complex, each level being a maze of passageways. Doors lead into rooms which contain computers, ammunition, lift passes, oxy-gum or computer passes. The last four are generally guarded by aliens who come in two flavours: stupid and mean. *(All resemblance to AA staff living or comatose is purely intentional – ed.)*

To access a computer you need a computer pass. An anagram is displayed and you have to solve it in order to get hold of


● And a mean one

the map showing your position and the location of a bomb bit. Lift passes are needed to move between floors and oxy-gum is essential to stop the toxic atmosphere killing you. Oxy-gum keeps you alive for a limited time and when it starts to run out you need to find more.

Stupid aliens always shoot at the same height, so duck and they miss: but the mean ones fire directly at you no matter where you stand. When they die they drop any equipment that was on them and you can pick it up. Mean aliens take more shots to kill and the different magazines that can be loaded into the guns come in a variety of powers. More powerful ammunition finishes off the bad guys quicker.

SECOND OPINION

"The graphics look really terrific – even if they're a little bland. In a weird way this helps create a gloomier atmosphere – as does the sound.

I liked playing this game a great deal, but I have to admit the controls got right up my nose. Why on earth didn't they have simple left/right/up/down? It's too complicated and you find it doesn't work 'naturally'.

The difficulty level is just right, and I'll be playing this for a good few evenings to come."

PbM

GREEN SCREEN VIEW:
There's lots of green on the colour version, so no problem

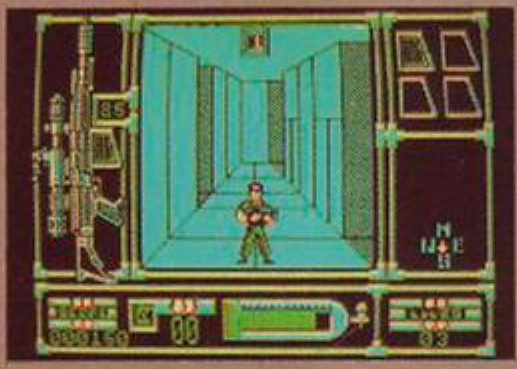
After escaping from the maze and getting all the parts of the bomb you go for a fly and take on the mechanised legions of aliens. More aliens await your destructive powers in a jeep race across the land and finally you enter the catacombs where the Giant Guardian must be defeated. Passwords allow you to go to the later stages of the game, avoiding the tedium of having to complete stage one all over again.

An atmospheric tune plays on the title screen and throughout the game, and another plays briefly before the action starts. Sound effects are adequate. Sprites are large and well animated with colour used reasonably well, though it would have been better if there were more.

Though it's not the most sophisticated program ever it does at least have some variety. The anagrams may not be difficult to solve (MALEK MIB=MIKE LAMB), but it gives you something to think about for a while instead of just blasting everything. It gets confusing when you push the joystick up because you turn through 180° and if you don't keep an eye on the compass you're soon lost and very disorientated. Apart from that it's a pretty good game with plenty of action to keep you playing for weeks.

GBH

FIRST DAY TARGET:
Complete stage 1


● Wandering down a corridor trying not to get lost

The Verdict

GRAPHICS 82%
- Large, well animated sprites.
- A little too green for my taste.

SONICS 36%
- Excellent tune plays throughout the game.

GRAB FACTOR 77%
- Puzzles to solve as well as some not very mindless blasting.
- Initially very confusing with the 180° rotation.

STAYING POWER 83%
- Three stages to complete, with the action varying in each one.
- First stage in the maze is disorientating and tricky to complete.

AA RATING 74%
- A good mix of puzzles and action make a good game.

GOLD, SILVER, BRONZE

Epyx ● £14.95 (3 cass), £24.99 (3 disk) ● joystick/keys

Winter Games was first reviewed way back in *AA9* and won a *Rave*. Now it has returned in a bumper sporting bundle complete with *Summer Games* and *Summer Games II* – neither of which has previously appeared on CPC.

All three come on separate disks/tapes and the events are loaded individually. There are 23 events, eight in each of *Summer Games* and *Summer Games II*, and seven in *Winter Games*.

With each of the three games you have a menu of options that consist of: **Compete in all events, Compete in one event, Practice, See world records, Controls** and **Opening ceremonies**. The opening ceremonies are pointless but a nice touch nonetheless and the controls option allows you to redefine the keys. It's best to use practice first to get you used to each of the events and then go for play one event. When you think you're ready you can go for the whole thing and play all events. If you do well enough then you get into the world records.

Up to four people can play and before you start you have to enter your name and choose a country. *Summer Games* consists of the **pole vault, diving, 4X400m relay, 100m dash, gymnastics, freestyle relay, 100m freestyle** and **skeet shooting**; *Summer Games II* has the **triple jump, rowing, kayaking, javelin, high jump, fencing, cycling** and **equestrian**; and *Winter Games* has **figure skating, free skating, speed skating, hot dog aerials (ski stunts), ski jump, biathlon** and **bob sled.** All that lot should be enough to exercise the most chair-happy of athletes!

Few of the events are waggle games and different approaches are needed to complete each. Many rely on you getting into the rhythm and moving the joystick in a particular pattern, whether left/right, up/down or even in a circular motion. Other events require fast reactions – such as the skeet shoot, for example, in which you have to hit clay pigeons (I didn't know pigeons were round and flat!).

Winter Games has the best graphics by far, but the graphics in the other two games are still pretty good. Some of the animation is a bit flickery and the graphics are a little small in the the two *Summer Games*, but there are no such problems with *Winter Games*. The national anthems of the country you represent are played well and there's also a good tune on the opening ceremony. Sound effects are terrific too.

Because of the vast price difference there should really be two ratings for this game, one on tape and the other on disk. **£25** for a CPC disk game is a lot of money – it's more expensive than most 16 bit software. There are three disks, but that's not enough of an excuse. The problem with multi-loed games of this type, though, is that a disk version is almost essential – unless you don't mind spending more time loading than playing the game.

Lots of events, plenty of variation and loads of money. **GBH**

FIRST DAY TARGET:
Get into the world records list for all events in one game



● Equestrian from *Summer Games II*



● Landing on your head in *Summer Games*





SECOND OPINION

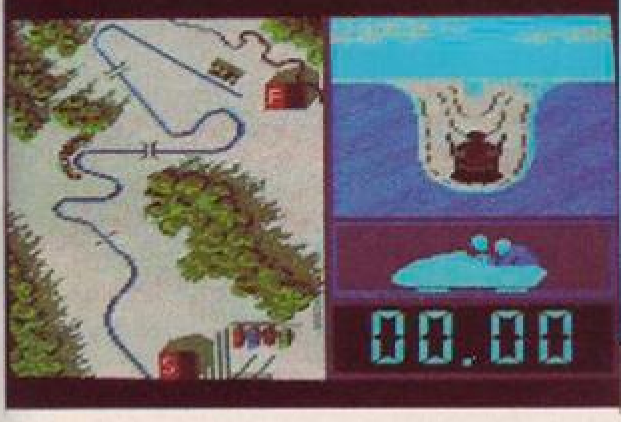
*"*Winter Games *was one of my favourite waggling compendiums, and I'm pleased to see it again.* Summer Games *also comes up to the same high standard in its graphics and gameplay, though the sound isn't quite in the same class.* Summer Games II *is the runt of the litter, and appears rushed, with some very poor graphics and dull content.*

I suppose at the price it's reasonable value, but I doubt many will be attracted to the idea of committing themselves so heavily to one theme. If you get this little heap home and find you don't like what you see you're in trouble!

The fact is, however, that most people who do buy Gold, Silver, Bronze *will feel happy with their purchase."* **PbM**

GREEN SCREEN VIEW:
A winner

●The Bobsled in *Winter Games*



The Verdict

GRAPHICS 68%
- Winter Games still has excellent graphics, even after two years.
- Other graphics are not up to the same standard.

SONICS 56%
- Some excellent tunes in all three games.

GRAB FACTOR 64%
- Competing against other players adds to the enjoyment
- Boring with only one player.

STAYING POWER 71%
- Loads of different events to play.
- Irritating pauses when waiting to load from tape.

AA RATING 66%
- Multi-load on cassette and high price on disk are severe disadvantages.



ROAD BLASTERS

US Gold ● £9.99 cass, £14.99 disk ● joystick/keys

Yet another arcade coin-op game has been transferred to the humble home micro by US Gold. The setting is the distant future where rally-type races are all the rage. There is a deadly difference between these rallies and the twentieth century variety, in that your car is armed and you are free to blast your opponents off the road. *(M25 commuters sign here.)*

Your car sits on the roadway – which comes out of the screen towards you –



● Approaching a checkpoint

and there's a panel at the bottom with vital information on speed, fuel and, of course, your score. The fuel gauge is divided into main and reserve, the main tank being used until it runs out, at which point the reserve tank in switched in. Run out of fuel and you lose a life and when all lives are gone it's game over.

Your objective is to pass through all the checkpoints of the stage and continue onto the next one. In all there are **50 stages** to go through and the hazards on each, as you'd expect, get progressively more frequent and deadly.

As you go for your casual 180 mph Sunday afternoon drive through the countryside you encounter other vehicles out passing time. They come in four varieties: **stingers, command cars, rat jeeps** and **cycles**. Ask them politely to get out of your way: pull your trigger and watch them go up in a ball of flame. Take care you don't collide with them though, because if you do you'll join in the flaming fun too. There are also some static hazards on the roads – mines, gun turrets, spikers and toxic spills.



● The support jet brings in an extra weapon for you

The Opposition

Stingers: lightly armoured cars despatched easily with a burst of machine gun fire. Worth 50 points.

Command Cars: heavily armoured, almost tank-like vehicles that need a cruise missile to destroy them. 100 points is your reward for their destruction.

Rat Jeeps: fast moving and evasive little guys. 50 points.

Cycles: the fastest moving and most evasive of your opponents. Because they're so difficult to hit they're 100 points worth.

Mines: to be avoided, otherwise you go boom.

Gun Turrets: fire as you approach. Only takes one hit to destroy the car. Can be blasted off the edge of the road.

Spikers: as deadly as mines and they're thrown off your opponents' vehicles while they're in front of you.

Toxic spills: to be avoided whenever possible.

Not everything on the road is quite so deadly: you come across fuel occasionally – vital if you hope to reach the end of the stage. Help in another form is provided by a support jet that flies over at times and drops weapons onto you. If you catch them you stand a better chance of dealing with your opponents. The weapons are: **cruise missiles, nitro injectors, cannons** and **shields**. Crash and you lose any extra weaponry.

SECOND OPINION

"It's a racing shoot-em-up, really, and that's all there is to it. Like them and you'll like it, though I tend to think it does nothing Overlander *didn't do better. If what you're after is good, old-fashioned mindless mayhem at a fair old lick, then* Road Blasters *should keep you in joystick cramp for quite a while, though when you're away from it you don't find yourself playing it in your mind all that much. And perhaps that's what makes a really good game – when it won't let you alone."* SC

GREEN SCREEN VIEW: Fine in green

As you reach each checkpoint and the end of a stage your fuel tank is filled up. Extra fuel is added to the reserve tank at the end of a stage and bonus points are also awarded. Then it's time to go onto the next stage of the rally.

Sound is fine – there aren't any tunes but the effects are good enough. For some reason part of the sound disappears at times and then comes back later, but other than that there are no problems. Graphically it's not exceptional, but at least the road moves better than in US Gold's previous attempt at a car racing game, *Outrun*. The horizon scrolls smoothly as the car turns and there's little flicker in the graphics. The roadside features do seem to jump towards you a bit, but it's not that bad.



● Armoured cars are tricky to destroy

It's a cross between a racing game and a shoot-'em-up. In some ways it's very similar to *Overlander* by Elite: hostile cars and roadside hazards, a multitude of stages to go through and strap on weapons to improve your survival chances. Of the two games I'd say that this is slightly better, but it is just a bit too easy to play and it gets boring rather quicker than you'd hope. **GBH**

FIRST DAY TARGET: Complete ten stages

The Verdict

GRAPHICS 67%

- Colourful and fast moving roadway.
- Collision detection is a bit off.

SONICS 43%

- Good effects –
- but sometimes they vanish for a while.

GRAB FACTOR 73%

- Plenty to blast and easy enough to start with.
- Loads from tape or disk every few levels, and it gets a bit annoying for cassette users.

STAYING POWER 67%

- 50 stages to complete.
- After a while you can go for ages without losing a life.

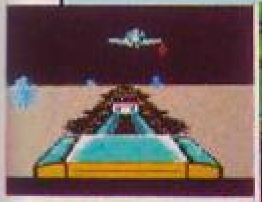
AA RATING 69%

- A good, hybrid shoot-em-up and racing game.

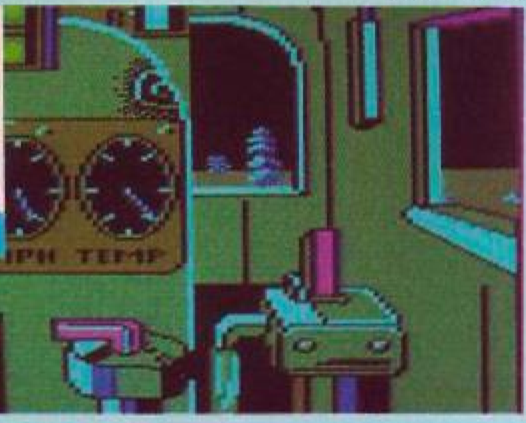
THE TRAIN

Accolade/Electronic Arts ● £8.95 cass, £14.95 disk ● joystick/keys

First there was a tank, then came a hydrofoil. Now it's time to trundle off into the past at the footplate of a train, all courtesy of **Electronic Arts**. Their latest venture into the world of simulations is set in wartime Germany. You take the part of a resistance fighter who, along with a colleague, tries to steal a train with France's art treasures on board. ('Will the person taking the train from platform four please put it back'.) The works of art are being shipped to Berlin to use as leverage in the impending German surrender.



● Air-raid



● Steaming along in the engine

The question you, me and they want to know, though, is whether Electronic Arts make it four excellent games in as many months with their latest offering, or are have they, as it were, run out of steam? Play begins at the station in Metz where you must first capture the train. You stand towards the rear of the train and give Le Duc covering fire as he tries to reach the signal box. Germans are hiding in the railway buildings and pop up occasionally to fire at you. Get your retaliation in first or the game's over. When Le Duc reaches the box you choose the **difficulty** level: easy, intermediate or expert. You then have to cover Le Duc as he returns: then it's time to depart.

The view switches to the inside of the train's cab and the simulation part of the game takes over. You have six things to operate in the cab: **throttle, furnace, brake, forward/reverse lever, steam blow off** and **whistle**. There are also three dials which indicate **steam pressure, engine temperature** and **speed**. When your engine is all steamed up release the brake, open up the throttle and away you go. Keeping the pressure up is essential, so periodically fill the furnace with coal: run out and you've had it. Keep an eye, too, on steam pressure, which can be released with the blow off lever – let it get out of control and the engine could blow.

To change direction you have to stop the train and move the **forward/ reverse lever**. Don't flip the lever when the train's moving, though, because the gears will be destroyed and the train can only travel in the direction it was going when you switched the lever. (Signals are sent with the whistle, of which more later.)

There are four other screens which can be called up: **front gunner, rear gunner, map** and **status**. The gunner screens are used to shoot at any attacking enemy aircraft. On the map screen a small cross represents the train, blobs are stations and rectangles bridges. If a station or bridge is blue then the Germans (hiss) have control of it: pink means the resistance have it (hooray). A status screen shows the damage sustained by the boiler, brake and art and also how many of the enemy you've killed. Your **score** is calculated using these figures.

You have to reach **Riviere** before dawn and there are a myriad ways to achieve your destination. A network of railway lines covers France and there are many points at which you can change track. You need first to signal the resistance – who'll switch the points for you – with one, two or three blasts on the whistle.

As you travel towards your destination you need to stock up on coal and water, which can only be obtained at stations. Before you can refuel the station



● Taking (it to) the bridge

must be captured. The sequence is very similar to the start-up phase and more Germans stand in the buildings. If you capture the station you gain some intelligence information, often being a warning that parts of the railway network have been destroyed. A message can also be sent to the resistance to tell them to capture a bridge or station, or arrange for repairs to the train. You don't have to stop in a station: you can just go straight through.

Bridges are a much more dangerous proposition altogether. If the bridge is held by the resistance there are no problems, but German controlled ones are guarded by boats. Trying to go straight across a bridge is fatal, since the boats easily pick you off. To cross a bridge you must first stop at the bridge and then blast the boats out of the water. Once they've all been sunk you can safely cross. Too many hits on the train and it's game over.

Sound is fairly simple but good – just machine gun effects and several different train noises. The graphics of the cab are good, but the rest are more functional than anything else.

I had high hopes for *The Train* on Electronic Arts' recent record, but... It's still a good game, but it lacks that certain something to make it a truly excellent game. The mixture of arcade elements and simulation works OK, but you do tire of the regular air attacks. **GBH**

The Verdict

GRAPHICS 68%
- Good engine room.
- Other graphics are sub-standard.

SONICS 36%
- Nice train effects.
- No tunes.

GRAB FACTOR 78%
- Combination of arcade and simulation works well.
- Air attacks are irritating.

STAYING POWER 82%
- Three levels of difficulty.
- Tricky to complete on all of them.

AA RATING 80%

- A very good game, but not quite up to recent EA standard.

FIRST DAY TARGET:
Reach Riviere on easy level

SECOND OPINION

"EA's simulators haven't been too realistic, at least as far as the CPC goes. The Train follows a groove that's getting too worn, a simulator with action sequences. If the latter were of high standard I wouldn't complain, but quite frankly they're not worth the memory expended on them. Let's hope EA's future releases display a bit more imagination and gameplay." **PbM**

GREEN SCREEN VIEW
Station sequence is trickier, but otherwise OK.

RAVE

BY FAIR MEANS OR FOUL

Superior Software ● £9.95 cass, £14.95 disk ● joystick/keys

The latest in a long line of boxing simulations has a twist that makes it different from all previous attempts: you can cheat! You don't have to, of course, but your opponents certainly will, and your chances of winning improve too.

In the centre of the screen is a boxing ring occupied by you, your opponent and the referee. Below it are two bars representing how many hits each fighter has taken and there's a clock that counts down to the end of the round. Above the ring is a board with the round number on and on either side of that is a score and a small figure. The figures have a number in the centre which tells you how many 'chances' you have left. Each player has five 'chances' which decrease every time you lose a round or get caught fouling your opponent.

The fight is split into fifteen rounds and to win you must have more points than your opponent at the end of the fight or reduce his 'chances' to zero. At the start of the round both damage bars are green and every blow taken by a fighter increases the amount of red in the bar. If the bar is completely red the fighter is knocked down and loses a 'chance'. The player with most red in his bar at the end of a round loses a chance. If both are



● Out for the count

equal, then no-one loses anything.

Now to the important bit – cheating! The two figures at the top of the screen can be one of three colours: **green, amber** and **red**. **Red** means that the referee has his beady little eye on you, **amber** means there's a chance of getting away with a foul and **green** means you can kick, butt and knee to your heart's content. Illegal moves are more damaging (and fun) than legal ones and so help you to victory. Once Mild Martin the junior champion has been defeated you go onto Steady Eddie the County Champion and work up to Deadly Dan the World Championship man. Each opponent gets progressively



● Punch good: kick better

SECOND OPINION

"As a boxing fan I have to look severely on this travesty of the noble art. How dare they allow kicking and illegal punching?

Right, now I've got that out of my system: BFMOF is brilliant! It's amusing, enthralling and the range of difficulty is wide enough to keep beginners and old hands equally entertained. It ain't cricket, as Frank Bruno memorably put it – but it sure is fun!" **SC**

GREEN SCREEN VIEW:
Knock out



● You can't win 'em all

tougher and more determined to win by foul means.

As with all combat games you have a wide variety of moves available to you, eight with fire pressed and eight without. Switching from legal to illegal and vice versa is a simple matter and you can also block punches when and if you feel like it.

All you get for sound effects are cheering crowds and the thud of glove on flesh, but that's really all you need. The boxer graphics are large, colourful and well animated, and *BFMOR* has a refreshing line in humorous graphics. Even the shadowy crowd looks good as they leap up and down in their seats at the end of a round. Colour is used well throughout.

First thoughts are 'Oh no, not another lousy boxing game', but fortunately it's much more than that. It's fun to play, the opponents are tough enough to keep you interested and, best of all, you can use unfair tactics to win a fight. Not the greatest game ever, but certainly the best boxing game. **GBH**

FIRST DAY TARGET:
Beat Steady Eddie

A scroll down memory lane...

Boxing has long been a favourite subject for the simulation treatment, and *BFMOF* is only the latest in a series of attempts – some good, others not so – to get us punchdrunk. Remember these?

- ***Frank Bruno's Boxing* (Elite). Opponents from around the world getting tougher to beat. Not the best, but fun to play – if the thought of mixing it with stupid stereotypes (an African with a *bone in his nose?*) doesn't bother you.**
- ***Rocco* (Gremlin, *AA2*, 36%). Also viewed from the rear. Unfortunately the opponents differ little.**
- ***3D Boxing* (Amsoft, *AA3*, 66%). Fighters are viewed from the ringside rather than behind, and it was the first one to have a two player option.**
- ***Barry McGuigan's Boxing* (Activision, *Rave* in *AA5*). Combat and a strategy part in training. Features two player option and is enjoyable still, especially if you want to think a bit as well as fight.**

The Verdict

GRAPHICS 76%
- Large and well animated boxers.
- Good use of colour.

SONICS 35%
- Thud and cheer.

GRAB FACTOR 69%
- Fouling adds greatly to the excitement.
- One or two player game.

STAYING POWER 80%
- Six different opponents to beat
- As in real life, once you're World Champion the only way is down.

AA RATING 83%

- Superior have been quiet for a long time, but they're back with a bang. Know what I mean, 'Arry?

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COMPILATION ROUND UP

A matter of course

LEADERBOARD PAR 3

US Gold ● £14.99 cass, £19.99 disk ● joystick/keys

Take one box, put in two tapes or disks, maps of the courses, a pad of score cards and what do you get? Probably enough computer golf to keep you going for months.

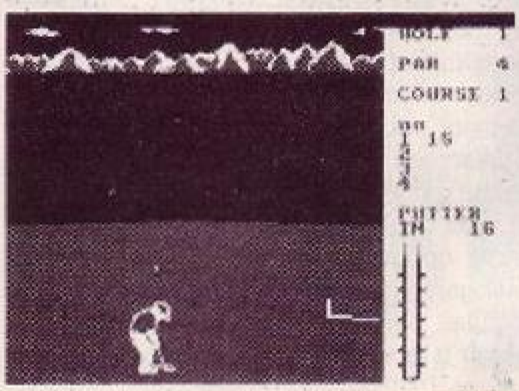
Leaderboard was a *Rave AA*21, and some supplementary courses were provided for it in *Tournament Leaderboard. World Class Leaderboard* arrived in *AA*26 and also got *Raved* about.

All together there are twelve different courses to play, four to each game. The graphics are very good for a golfing game/simulation.

It's well presented and not just bundled together hastily for a quick buck. But then again it is expensive. You do however get some extras in the score-cards and maps. Computer golfers will find plenty to do with this, but if you're not an avid player then you might find the compilation just a little too narrow in scope. GBH

GREEN SCREEN VIEW: Grass is green anyway

***AA* RATING 70%**



● A hole in 15 – Nick Faldo watch out!

Summer – what summer?

SUMMERTIME SPECIALS

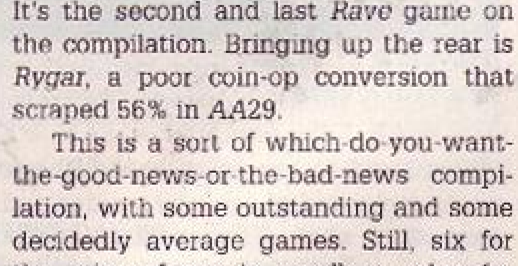
US Gold ● £12.99 cass ● joystick/keys

Six of US Gold's releases of the past year have been bundled together into a compilation: *Solomon's Key, Bravestarr, Captain America, Trantor, World Class Leaderboard* and *Rygar*.

Solomon's Key is a simple but fun platform game that scored 78% in *AA*26. *Bravestarr* is based on the cartoon series of the same name and is probably one of the easiest games ever to complete. It received 39% in *AA*33. *Captain America* was never reviewed, but had it been the rating would have been in the region of 53%. *Trantor* is a shoot-em-up with some huge and well animated sprites that earnt it a *Rave* review in *AA*27. *World Class Leaderboard* is a golfing simulation reviewed in *AA*26. It's the second and last *Rave* game on the compilation. Bringing up the rear is *Rygar*, a poor coin-op conversion that scraped 56% in *AA*29.

This is a sort of which-do-you-want-the-good-news-or-the-bad-news compilation, with some outstanding and some decidedly average games. Still, six for the price of one is excellent value for money, and with compilations that's often the deciding factor. GBH

GREEN SCREEN VIEW: No problems



● Solomon's key, a good ol' fashioned platform game

***AA* RATING 69%**

The seven samurai, karate, kung fu...

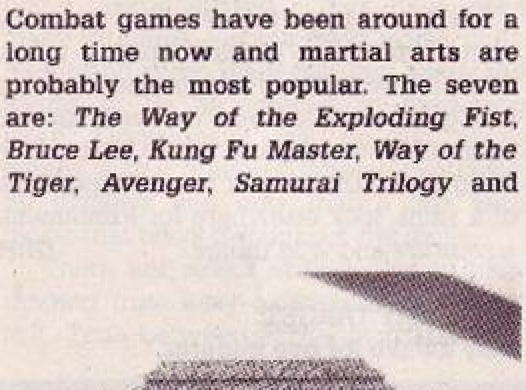
KARATE ACE

Star Games ● £12.99 cass, £14.99 disk ● joystick/keys

Combat games have been around for a long time now and martial arts are probably the most popular. The seven are: *The Way of the Exploding Fist, Bruce Lee, Kung Fu Master, Way of the Tiger, Avenger, Samurai Trilogy* and *Uchi Mata*.

The Way of the Exploding Fist was the *Mastergame* in the first issue of *AA*. It's a traditional kick-em-up for one or two players, and is still good even today. *Bruce Lee* was *Raved* about in the following issue and was more of an arcade game than a combat game. *AA*11 saw the arrival of *Kung Fu Master*, which notched up a respectable 72%. *Way of the Tiger* got 70% in issue 8 and the sequel, *Avenger*, got *Raved* about eight months later. *Samurai Trilogy* got the worst rating of all at 47% in *AA*24 and the compilation rounds off with 65% for *Uchi Mata*, reviewed in *AA*20.

If you're a fanatical combat gamer you'll find this compilation unbeatable, but seven combat games may be just too much for people with a more delicate stomach. GBH



● A piece of history: *Exploding Fist*, the first ever *Mastergame*

GREEN SCREEN VIEW: Kick-em-in green

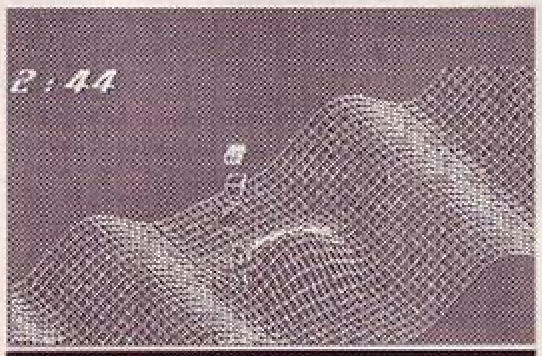
***AA* RATING 73%**

VECTORBALL

Mastertronic ● £2.99 cass
● joystick/keys

A futuristic ball game, *Vectorball* is played between two robotic players over an irregular pitch. The idea is to score as many goals as you can and concede as few as possible within a time limit. Five matches are played, and you can play another person or the computer.

The playing area is viewed from slightly above and at an angle. It scrolls as the ball moves around to show the goals and the robotic players. A click ticks away the seconds on screen too.



● A mixed surface is tricky to play on

You move your robot around trying to catch the ball. If you're moving when you catch it then you carry on because of the momentum: otherwise you have to stand still. Once you have the ball you can shoot in any direction. Shot power is increased by extending your neck.

There are four different pitches to play on: hills, ditches, waves and mixed. With hills you have a generally flat pitch with some hills (more hills on higher skill levels). Ditches are the opposite of hills and waves are troughs that run both along and across the pitch. With mixed you have a jumble of all three types to give a very strange playing area indeed.

Colour's not used brilliantly, since most of the screen is black with white lines. Scrolling of the pitch is fast and the two robots zoom around. There's some flicker, but not enough to ruin the game. On the title screen there's a good tune, but effects in the game are simplistic.

You don't get a completely stupid computer opponent and so you'll play a good few games before you start beating it on a regular basis. The most irritating thing about it is waiting to play between games because there's a very long pause. Control is confusing as you switch from directional when you run around the pitch to rotational when the ball is in your possession. One or the other is fine, but not both. Not bad for a budget game, but that's all it could be. **GBH**

SECOND OPINION

"The bizarre joystick controls on this drove me absolutely potty. Getting going is just so frustrating that I suspect many players, like me, won't have the patience. And why should they?" **SC**

GREEN SCREEN VIEW:
Mainly mono anyway

The Verdict

GRAPHICS 63%
□ Fast scrolling and well designed pitches.
■ Lacking in colour.

SONICS 52%
□ Tune on title screen.
■ Few effects.

GRAB FACTOR 66%
□ Intriging game design.
■ Confusing controls detract from the game.

STAYING POWER 55%
□ Tough computer opponent.
■ Will tire of it rapidly.

AA RATING 62%
□ It's good, but not that good.

FIRST DAY TARGET:
Beat the computer

THING

Players ● £1.99 cass
● joystick/keys

Planet Rombus has small spherical occupants composed of squashy insides and a hard silica shell. Their political advisor, the Ball, is off to see the Dingalinger Overlord. Thing is an intergalactic postie who's assigned to deliver the Ball, but the Ball is in a playful mood and refuses to go until Thing (you) has solved ten simple tasks. *(Whaddya means sounds silly?)*

You've a list of objects carried, commands, the day and a third of the screen with a horizontally scrolling playing area in which you stand. Ball floats just behind him and can fire at anything hostile that heads for you. Each time you're hit damage is sustained and after a certain limit is reached you fall unconscious for a day. The game lasts a 'week'.

You start the game standing next to a telephone booth and carrying a directory. If you 'use' the telephone you're asked for a destination from a to z, each letter being a different zone to the game. Objects are littered around the zones floating in canisters, and may be taken from them and carried to other locations to help you solve the ten tasks. Objects can also be examined and you can abort or pause the game. A status panel can be called up to let you know how things are going.

Little colour is used and the scrolling is smooth, but slow. The sprites of Thing, Ball and enemies are nice. Sound is footsteps and shots and a title screen tune.

At first it looks a cute game with nice sprites and some problem solving to do. After a few (very few) minutes however you get bored: all you do walk around (incredibly slowly) and try to find something to do. Unless you have the patience of a saint, look elsewhere for excitement, adventure and wild things. **GBH**

SECOND OPINION

"For anyone above the age of, what, ten, it's dreary and dull – why have someone walking so slowly? – but perhaps for anyone younger than that who's easily amused it could be a hit. Just don't make me play it." **SC**

GREEN SCREEN VIEW:
Green

The Verdict

GRAPHICS 56%
□ Smooth scrolling graphics.
□ Good use of menus and windows.

SONICS 57%
□ Walking, and a better than average title screen tune.

GRAB FACTOR 47%
□ Silly scenario.
■ The most tedious game for ages.

STAYING POWER 29%
□ Ten tasks to solve.
■ See Grab Factor.

AA RATING 44%
■ Worth a budget price – if only just.

FIRST DAY TARGET:
Stay awake for five minutes

● Thing stands next to a phone box



METAPLEX

Addictive ● £2.99 cass, £6.99 disk ● joystick/keys

Garth is a naughty two headed monster with his mind set on the destruction of your home world. He lives inside a huge metal complex in the interior of an asteroid. Having arrived inside the asteroid you now have the simple task of killing Garth and escaping from the asteroid.

The screen is split into two sections: a flick screen play area and an information panel. Included in the information panel are number of craft, object carried, laser power, acid level, shields and a three by three grid of boxes (more of them later). If laser power is out you can't fire and when your shields are gone you need to find a new craft.

There are three skill levels. Distributed throughout the complex are small flasks, which are initially empty, but which can be filled from the acid tank. If the flask is then dropped over a power unit its corrosive properties eats into the unit and drain Garth of power. When all four units have been destroyed in this way you can hunt Garth down, shoot him and leave by the exit as fast as possible.

It sounds simple enough, but unfortunately the complex is protected by a security system. The system is twofold: it has nasty little droids who try to kill you, and there are sections of the base blocked off by electronic doors – which is where the nine boxes come in. They control doors, air flow, laser refill points, teleporters and also release droids into the complex. The condition of the boxes is altered by landing on a security panel and pressing fire.

The graphics are colourful, but lack great detail. Sound is simple, but there's a pleasant tune on the title screen and during pause.

There are plenty of things to shoot and problems to solve. In some ways it reminds me of *Dan Dare II*, but it's nowhere near as good. At £3 it's a reasonable effort. **GBH**

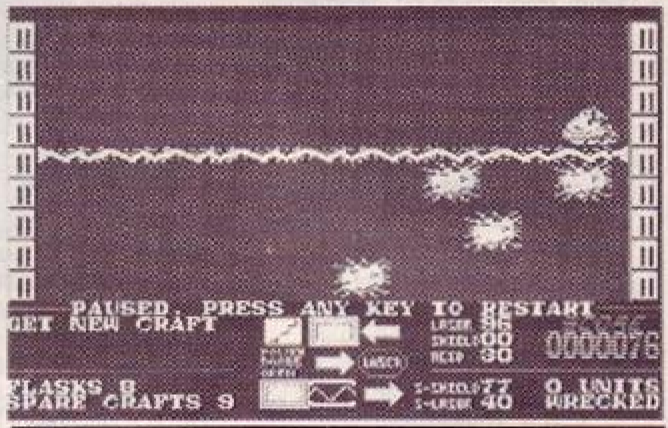
SECOND OPINION

'Not the most innovative game that's appeared this year, but on the other hand they're not asking £15 for it. I don't think for £3 you can expect to be excited to death, and with Metaplex *you won't be."*

SC

GREEN SCREEN VIEW: OK

FIRST DAY TARGET:
Destroy two power units



● **Flying around**

The Verdict

GRAPHICS **57%**
- □ Fast moving and colourful sprites.
- ■ Lacking in detail.

SONICS **64%**
- □ Great title tune.
- ■ Uninspiring effects.

GRAB FACTOR **52%**
- ■ Instructions are a little confusing.
- ■ Too easy to get your ship damaged.

STAYING POWER **63%**
- □ Huge complex to explore.
- ■ A game that demands to be mapped.

AA RATING **56%**
- ■ Addictive should stick to strategy games.

GM CHESS

Camel Micros ● £14.95 disk ● joystick/keys

Chess has been around for a very long time and computer chess for a few hundred years, for while the first chess computer may have been mechanical, it was still a computer at heart. Micro computer chess has been around since just after home micros arrived. There have been many attempts – some good, some indifferent and some plain bad, but there still seems to be an interest in producing more. Occasionally you do get chess games with a gimmick: speech synthesis, 3D displays and now there's one with music that plays throughout the game.

There are seven skills levels to play, ranging from easy to exceptionally difficult. Time between moves increases considerably on higher levels. You can choose from a wide selection of openings for the computer to start with or you can let it pick one at random. One or two people can play or the computer can play against itself.

Options to turn the music off, changes sides, change level and set up the board are included. From the main menu you can also load programs that cover rules, openings, mid game and endgame.

The tune is played throughout the game, except for when the computer is thinking. Sound effects are minimal, but it is a chess game after all. Graphically it's nothing out of the ordinary, with the board viewed from above and colours that can be changed to suit your monitor.

What can you say about a chess program that hasn't been said a million times before? £15 isn't much really, but then it's not the best chess game around. That honour still goes to *Colossus Chess 40* by CDS (*AA*8: a whacking 92%). If you want music while you play, put on a record. **GBH**

● **Check it out, mate**



SECOND OPINION

'I can't judge how good this one is at beating the Karpovs and Kasparovs of this world, but at my standard it's reasonably fast. At more advanced levels, however, it's hardly greased lightning.

Want to play chess and can't find a partner? This could be just the job."

SC

GREEN SCREEN VIEW:
You can alter colours, so no hassle

FIRST DAY TARGET:
Beat the computer on level 3

The Verdict

GRAPHICS **47%**
- □ Easily identifiable pieces.

SONICS **53%**
- □ A tune in a chess program!

GRAB FACTOR **54%**
- □ Reasonable introduction to chess.

STAYING POWER **76%**
- □ Chess programs never die.
- ■ On high skill levels the computer take hours to make a move.

AA RATING **63%**
- □ Appeal limited to chess buffs.

AA SMALL ADS

FOR SALE

CPC 464, colour monitor, speech synthesiser, lightpen, £700 worth of games, many magazines, folders, dust covers, joystick, worth £1200, sell for £375 ovno. Tel: (0268) 693073

Basic programmers! Fancy some decent M/C programs (define your own screen waves, alther the 'ready' prompt, define & use M/C sprites without understanding M/code) Prices: 60p-£4.99. Send SAE to: M Gledhill, 21 Newtake Road, Tavistock, Devon, PL19 9BX.

6128 colour, second disc drive, Multiface 2, stereo Amp, joysticks, 70+ software titles (varied), books, mags plus much more worth £1100+. Sell for £450 or to highest bidder. Medway (0634) 826193.

Amstrad Action Oct '85 (No 1) – Sept '88, also Amtix Nov '85 (No 1) - Mar '87, ACU Aug '85 - Sept '87, CWTA Oct '85 - Oct '87, C&VG Dec '85 - Feb '88. Offers. Alan Lynas, 30 Hanwood Heights, Dundonald, N. Ireland. BT16 0XU.

"Sleeper" 6128, five utilities, directory editor, file copier (40K), formatter, full 128K memory editor, tape/disk header reader. Preserves first 48K, acts like a rom, sleeps in extra bank of memory, can be used from within Protext etc. High quality. 100% machine code. Free character designer included. Price £7.99 disc, (6128 only). P Johns, 27 Fairfoot Road, Bow, London, E3 4EG.

CPC 6128 colour monitor, DMP2000 printer, Multiface II, 8 bit printer port, 100+ games, 100+ mags, printer paper, ribbons, serious software, books, worth £1000+. Bargain £450 ono. For quick sale. John Turner, Leeds, 0532 524679 after 5pm.

CPC music: tape or disk. Programmed by us. £5 tape, £10 disk, plus postage. Good selection, Buddy Holly, Shadows, Beatles, Mozart, Beethoven. No need to load 'music' program. Reading (0734) 871536.

CPC6128 with colour monitor, DMP 2000 printer, £250 of games – most on disk, Cheetah Mach 1+, joystick, £50 of magazines, Tasword 6128, Word processor, Art Studio, books and manuals, 10 blank disks. Worth £900+ only £400 ono. Also DK'tronics TV receiver £40 ono. All items are in excellent condition. Tel: James on (07357) 3128.

CPC 6128, green monitor, modulator, 14" colour TV, printer, joystick cassette player, recharger + batteries. Amstrad magazines inc:- AA, ACE, Amstrad Computer User, Computing With The Amstrad CPC. Software – most on tape, others on disk. Total 120 games. Most transfer to disk. Ring Ambergate 6272.

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CPC6128 colour monitor, tape recorder, joystick, books, magazines. Over £200 original software: 23 disks, 20 tapes. Cost £700+. Sell for £350. Tel: 040 481 5194.

Personal Golf Accumulator – 6128 £3.50. Enter and view scores. Obtain averages per hole and course. Race Analysis – All machines £3.50. Version 5.1. improved performance. Mr J.E. Blair, 21 Torranyard Terrace, Hamilton, ML3 8XG.

Micro-Music Creator – Read the review in this month's AA? Then send for your copy now! We are offering a 20% discount to all Amstrad Action readers who order before 1st November. Tape:- £7.95, Disc:- £11.95, Rom:- £19.95. Make cheques/PO's payable to First Byte Software and send to: First Byte Software, 71 Barn Glebe, Trowbridge, Wilts, BA14 7JZ. Tel: 0225 765086.

Linnet modem + RS232 + Spectre Comms pack. Cage rom only weeks old. Cost £236. Accept £140 ono. Telephone Halstead (0787) 476706.

Amstrad CPC6128 colour, tape deck, printer, paper, joystick, books, discs, £300+ software, complete collection Amstrad Action, binders. Cost £1100+, accept £495 ono. Phone 0292 262818.

Astrosuite – The perfect complement to "Star Watcher". Set of planetary astronomy programs. Disc only: SAE for details to Alastair Scott, 10/3 Blacket Avenue, Edinburgh. EH9 1RS.

Maxam cartridge fits 6128 with Homesoft romcard, holds four £35.00. Phone Southampton (0703) 733750.

Okimate20 owners. 16 new colour, shaded and mono screen dumps using upto 67% less ribbon. Vitalise your printer and save money. Disc £6.95. Dave Gardiner, 72 Sandfordleaze, Avening, Tetbury, GL8 8PB.

Vidi Digitizer £50. DK'tronics 64K £15. Advanced Art Studio £12, 30 game son tape £12, Gnome Ranger on disk £4. Preator on disk £5, + lots more phone Portsmouth 690349.

WANTED

DDII disk drive for Amstrad CPC 464. Must be in good condition. Wil pay £60. Tel: Robert (0964) 534206.

SERVICES

Eprom services, your own programs (Basic, Basic/Binary, Binary) programmed into Eprom run using RSX commands (faster than discs!) from £9.95. Telephone (0438) 354908 (evenings), 25 Dovedale, Stevenage. SG2 9EP.

Loads of Public Domain software. No big adverts, so very cheap. Plus FREE games and utilities. Send SAE for details to: E Prattley, 30 Mellor Brow, Mellor, Blackburn, Lancs, BB2 7EX.

Hackers, tape-to-disc, disc-disc, disc-tape, disc editor, de-protect, speedlocks, disc clonng, handles funny formats etc. Tape £8.00, disc £10.00. Cheques/POs or SAE for details. E Prattley, 30 Mellor Brow, Mellor, Blackburn, Lancs.

Phoenix Tape to Disc specialists. multiloader no problem even Gryzor with CHEAT MODE! State 464/6128. 85p per game, compilations 80 per game, multiloaders £3.50, add 30p per tapes to be returned if required. Enclose disc when ordering. PHOENIX, 10 Walter St, Draycott, Derby, DE7 3DE. Tel: 03317 4490 after 7pm. Make cheques/postal orders to Mr W Mends. If we can't disc it no one can!

OTHER

Micro users earn £3 - £4 per hour for your hobby. Send £1 + SAE for information to Mr Ian Stewart, 58 Whinbank, ladywell, Livingston, West lothian, EH54 6HL.

Rom deactivator fits between computer & romboard. Undetected by software, 100% loading every time. L.E.D. Status indication, plus special reset switch. £14.99. D Crossman, 61 The Crescent, Breaston, Derby, DE7 3DE. SAE for details.

This section of the magazine offers you the chance to speak directly to the huge waiting world of CPC owners – or would-be owners. Users report good results. You can place an ad of up to 30 words for just £5. So you could use it to sell a printer or launch a user group or publicise a piece of software you've written. One thing you can't advertise is the sale or swap of software. Such ads can be misused by pirates. Fill in the application form and send it to us together with payment. We'll then place the ad in the next available issue (published 2-7 weeks after we receive your order.

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FIRST BYTES

An assembly language series with Richard Monteiro

Welcome, assembler fans, to another feast of fun *(oh get on with it – ed.).* Ahem, by now you should have familiarised yourself with **Micro Assembler (MA)**, which was on last month's cover cassette. If you've forged ahead and tried writing your own routines you'll undoubtedly have come across many of the program's features *(quirks – ed).* Expect a box most months detailing corrections, enhancements, patches and tips for **MA** – all contributions gratefully received. See below for this month's 'tweak'.

Now let's get on with assembly language programming.

Easy as A, B, C

All operations are performed on registers. A while back you learnt that numbers could be loaded into registers (in much the same way as values are assigned to variables). The general format is `LD X,Y` where `X` is a register (`A, B, C, D, E, H, L`) or register pair (`BC, DE, HL`) and `Y` is a number – between zero and 255 for registers and between zero and 65535 for register pairs. For instance, `LD A,27`, `LD BC,7328`, `LD E,167`.

Using a similar technique to the one detailed above, registers can be filled with values held in other registers. `LD A,B` places the contents of register `B` into register `A`; `LD H,C` fills `H` with whatever is in `C`; `LD D,D` loads `D` with `D` (useless, but possible nonetheless).

`MA` accepts the standard syntax of loading a register with a value. It also handles register-register loading, but wihout the usual comma: `ld a d`, `ld c c`, `ld h l` and so on.

Something else

You should also know that numbers can be retrieved from, and placed in, memory. Basic uses `PEEK` and `POKE`; assembler equivalents are very similar. For example, `LD A,(&8000)` loads the `A` register with the contents of memory location `&8000` and `LD (&8000),A` places the contents of the `A` register in memory location `&8000`. **MA** uses an odd syntax to simulate these commands (this will be altered soon):

`ld a (,&8000)`, `ld (,&8000) a`

Now for something new. If you want to increment a BASIC variable by one, you might try something like `A=A+1`.

In assembler you would use `INC A`.

Next month you get the chance of writing a short assembly language program using the instructions you have learnt to date. Be prepared!

And *Hacker's Only* returns with a vengeance, with the 100 Z80 instructions Zilog don't want you to know about!

This increases the value held in `A` by one. Any register or register pair can be increased by one: `INC C`, `INC DE`, `INC BC`. While adding one to a register has its uses, adding large numbers to a register is generally much more useful. The instruction to do this is the appropriately-named ADD instruction. Only the `A` register can make use of this technique: `ADD A,20`, `ADD A,176`.

Add contents

Both the `A` and `HL` can have the contents of other registers added to them. `ADD` is opcode that makes this possible. Things like `ADD A,D`, `ADD A,L`, `ADD HL,DE` and `ADD HL,HL`. Note that the `A` register can only have 8-bit registers added to it while `HL` can only accept 16-bit registers (register pairs).

MA doesn't handle `ADD` instructions in the usual manner, so take care. If you are adding to the `A` register use the format `ADD,X` where `X` is any number between 0 and 255. All other `ADD` instructions mustn't have a comma splitting any part of the instruction. `ADD HL BC`, `ADD A B`, `ADD HL HL` are examples of how **MA** prefers things.

Tweak Micro Assembler

As you have probably found out, MA source code looks strange. For instance, dashes (–) are used to separate opcode from address or data and the right-pointing square bracket (]) denotes a label. Not only is this confusing to the beginner, but it's also wrong. Here are some remedies.

Change these lines to read:

```
2210 IF LEFT$(a$,1)=":" THEN 2690
2260 IF MID$(a$,t,1)="," OR (MID$(a$,t,1)=" " AND MID$
     (a$,t+1,1)=":") THEN p=t-1:b$=LEFT$(a$,p):t= LEN (a$)
2390 IF LEFT$(e$,1)=":" THEN 2590
2450 IF LEFT$(e$,1)=":" THEN 2590
3110 IF n=2 THEN PRINT TAB(20);c$;",&";
     HEX$(PEEK(a+1));:a=a+2
3120 IF n=3 THEN PRINT TAB(20);c$;",&";
     HEX$(PEEK(a+2)*256+PEEK(a+1),4);:a=a+3
```

Add these lines:

```
3101 IF n=2 AND (PEEK(a)=&18 OR PEEK(a)=&10) THEN PRINT
     TAB(20);c$;" &";HEX$(PEEK(a+1));:a=a+2:GOTO 3130
3102 IF n=3 AND (PEEK(a)=&C3 OR PEEK(a)=&CD) THEN PRINT
     TAB(20);c$;" &";HEX$(PEEK(a+2)*256+PEEK(a+1),4);:
     a=a+3:GOTO 3130
```

Load `ASMBPROG.BAS`, make the alterations and save the file as `AMCUSTOM.BAS`. Source code must now follow these rules:

- **Opcodes and data are split by a comma (`10 'ld a,27`).**
- **Labels must start with a colon (`10 ':loop ld bc,2000`).**
- **CALL, DJNZ, JR and JP instructions no longer need a dash (or comma) between opcode and label – a space must be present (CALL :txt).**

When an area of memory is disassembled, all the above rules are obeyed. Oddities still exist: these will be ironed out over the months. Source listings will appear in up-to-date-MA format and standard format. Be sure to alter MA when we publish modifications: if you don't you'll find the listings won't work. You've been warned.

PROBLEM ATTIC

Can Pat McDonald save the world again? Nope.

Even more basic

I have recently upgraded my 464 into a 6128 by having the 40025 Basic ROM fitted (by an authorized service agent). I now want to use the extra commands that a 6128 has in my Basic programs, but don't know how to.

I've been to my local computer shop (Soft Spot) but, although they tried very hard, they couldn't help and suggested you. Please tell me just what advantage I have now!

Martin Powell, Daventry

Basic 1.1 (which the 664 also has) is a fair improvement over the original. A full listing of the new commands would take up too much space, so I suggest you buy a 6128 manual. They're available from CPC Ltd, ☎0772 555034. They'll supply one for £12.83, which includes postage and packing as well as VAT.

Until you do splash out on such a manual, just try this one command. Put the graphics cursor somewhere on the screen using `|MOVE`*, and then put in* `|FILL,inknumber`*. Also, when using RSX's, you can put data into the command, like this:* `|REN, "NEWNAME", "OLDNAME"`*. Much better than* `a$="OLDNAME": b$="NEWNAME"`*, and then* `|REN, @a$, @b$`*.*

Death knell

Last night I switched on my CPC464 and promptly got an electric shock when I picked up my JY2. As a result of this my machine has stopped producing any sounds except for hisses.

Software loads into memory but no there are no in-game effects. What's wrong? Will it cost much to repair, and can I do it?

Mark Walker, Folkestone

I recently gave the office a cheap laugh when I attempted to repair a similar fault (considering how much it's costing to repair your repair, McDonald, I don't think 'cheap laugh' is quite right – ed). The problem lies in incorrect wiring inside the Amstrad that goes to the AY-3-8912 sound chip, which is also responsible for reading the keyboard and (naturally) the joystick. Occasionally static builds up on the joystick, and picking it up results in a voltage going through the chip that wrecks the sound.

Replacing the chip is a problem because it's generally soldered in. If there is a socket for the chip, then unplugging the chip and plugging in a replacement (widely available – try CPC if you have difficulties) is no problem.

De-soldering the chip is a lot trickier, and is generally best left to a decent repair service – Analytical Engineering are doing our 464 as I'm writing this. If your machine is under guarantee take it back to where you bought it.

Languages, actually – what about you?

I am preparing for going on to university and I am keen to learn a new language for a degree. I have heard it is best to learn Cobol as it is one of the main languages you use. Is this true? If so, can you recommend such a language, costing a maximum of £60?

If it best to learn another language, can you recommend any other packages. I have a fairly good knowledge of Basic but not machine code, and I own a 6128.

S D Griffiths, Harpsden

Depends. If you're going into a business orientated course, then Cobol will be taught to you anyway. Otherwise, who can tell? The best thing is if you ask around when you get there what will help you – there's not a lot of point me telling you to go and buy Pascal if you'll be using C!

Two companies who produce various languages for the CPC are HiSoft (☎ 0525 718181) and Arnor (☎ 0733 239011). Both produce fair quality languages, although Hisoft have a larger range. For your original suggestion, Nevada Cobol is very good. Also look out for Turbo Pascal – these languages run on CPM+, and so are OK for 6128's.

Another possible source is Wacci's excellent Public Domain Library. See the adverts in AA in recent months – just because the languages are cheap doesn't mean they're no good. Documentation (manuals and so forth) can be scanty though.

Main news of the day

I bought my CPC464 at the beginning of the year, and am slowly learning programming. *Absolute Beginners* is a great help. I have recently bought the October edition of Amstrad Action with the free cover cassette.

Side 1 – *Dizzy* – is OK, but the reverse side will not load. I keep getting the message **Read error b**. I wondered if any other people had wrote to advise you of this fault, or if it is just my copy. I would be interested to hear your comments regarding the cassette.

J E Audsley, Dewsbury

Many readers have congratulated us on the contents of the cover tape – and I'd like to extend a big 'Thank You' to everyone who contributed (Your cheques will be in the post soon!).

No copying process, however, is perfect. This page is being written two weeks after the release of AA37. So far complaints received total 27. Allowing for one person in ten writing in, that means that perhaps 300 tapes did not work.

Out of 47,000+ reproduced, that figure is pretty good. So bad tapes occur less than one percent of the time. We'd prefer there to be no bad copies – but realistically, there always are some.

If you do get problems with loading, the first thing to do is just try listening to the tape. See if the quality of the tape is very bad. In general the CPC's can cope with all but the worst in quality – look for things like tape speed up and slow down, high/low pitch or volume.

Another problem is head azimuth alignment. The head that reads the tape works best when it's more or less at right angles to the tape, but the tape direction can vary. This is more of a problem with 6128's – the external recorder can be set to virtually anything, and need not necessarily be a machine similar to the 464's internal cassette. Indeed, the vast majority of problems have occurred with 6128 owners.

If you have a reasonable quality of tape, then I suggest you try as hard as possible to get the tape working yourself. The way you do is the is to: a) try altering the volume, and if that fails, b) start adjusting the azimuth. Always apply tiny adjustments, and remember the position you started at.

If you still can't get any joy at all, then the only course open to you is to send it back to us, and we'll replace it for you. Bear in mind though, that although we test the replacements on a 464/6128 as applicable, there's no guarantee it will work on your system. Still, we'll hold the offer open for six months. Get your naff tapes back to: Duff tapes, Amstrad Action, Future Publishing, 4 Queen St, Bath BA1 1EJ. And once more, apologies.

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FULLY AUTOMATIC – JUST ONE KEYPRESS * ONLY ONE PROGRAM TO RUN WHICH FINDS THE SPEEDLOCK TYPE AUTOMATICALLY * WILL TRANSFER ORIGINAL AND MANY OF TODAYS SPEEDLOCK PROGRAMS * NO FIDDLING OR MEDDLING – WRITTEN WITH THE AMATEUR IN MIND * AUTOMATIC DISC FILENAMES * NO WASTED DISC SPACE – SAVES THE CORRECT AMOUNT OF GAME CODE * SAVES 99% OF OPENING SCREENS * SCREENS SAVED IN THEIR CORRECT COLOURS * COMPRESSES SCREEN CODE TO SAVE EVEN MORE DISC SPACE * FASTER LOADING TIMES FROM DISC BECAUSE OF SHORTER FILE LENGTHS

SPEEDTRANS PLUS2 transfers over 200 programs to Disc, some of the latest it will do are MADBALLS, FREDDY HARDEST (both games) BASKET MASTER, MATCHDAY II, PHANTOM CLUB, GRYZOR (main program), SUPER HANG ON.

These latest Speedlock types can be identified by the whole screen flashing with horizontal bands of colour immediately after the first file has loaded. Do remember that **SPEEDTRANS PLUS2** does not save all the memory in the hope of having saved all the game. It saves exactly the right length of code. All screens are saved in compressed form – some as little as 4K (Basket Master) - thus saving even more disc space.

SPEEDTRANS PLUS2 is the most sophisticated Tape-to-Disc transfer utility for SPEEDLOCK protected programs ever published. It will certainly transfer more games than any other Speedlock transfer program on the market and with much greater ease. Other transfer programs require you to know how long the game code is so that you may run an alternative program for the long games which does not save the loading screen. This is done because they do not make use of the extra memory available on the CPC 6128 or from the use of an extra RAMPACK (DK'Tronics 64K or greater.) This program is highly intelligent in that it first reads the loader from the tape and establishes which type of protection is in use from 6 alternatives. At the end of the load it then finds out how long the code is and if it is too long to be saved to one file it will move the excess code into the banked memory and save the game in two parts and write the appropriate loader program. The screen will also be moved into a bank and compressed before saving. This can mean screen files as small as 4k (Basket Master) depending on mode and content. All this adds up to a lot less disc space being used than with other transfer programs and you will nearly always get the loading screen saved. The exception to this is when there is no loading screen (as in SCRABBLE) or when the screen is blanked out and more code is loaded into the screen memory, as in BMX SIMULATOR and MADBALLS for example. Try getting a screen with Multiface or any other imager. These imagers are only capable of saving what you have in memory at the time the button is pressed. What happens in multi part games? you have to press the button for each part thus wasting precious disc space. They also save far too much code and therefore waste even more space and saving too much code means longer loading times from disc. Programmers are now checking to see if you have an imager plugged in an if you have the program will not load. Imagers also have to be in place before you can reload your program and saved programs can only be reloaded in to the machine in which they are saved. **SPEEDTRANS PLUS2** creates totally stand alone files and if you have nother CPC even without extra memory they will run prefectly. It also displays the saving name on screen at the start of the load with all except the very latest games. In all cases the disc saving name is displayed while the save is carried out. To run the transferred game just RUN this name. Another intelligent feature of **SPEEDTRANS2** is that the very first thing it does is to find out which drive it is in. This means that if you have a two drive system you may run the program from drive B by typing RUN "B:DISC" or :B:RUN"DISC. However the saving will ALWAYS be to DRIVE A so with a single drive you must change the disc when prompted on screen.

DISC:- UK £14.99 – EUROPE £16.25 – REST OF WORLD £17.00
Upgrade your SPEEDTRANS PLUS – send your disc together with: **UK £2.00 – EUROPE £3.25 – REST OF WORLD £4.00**
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Program	UK – Disc	Eprom	Europe – Disc	Eprom	Rest of World – Disc	Eprom
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PROTEXT FILER * NEW *	19.50	N/A	20.75	N/A	21.50	N/A
PROTEXT	21.50	34.50	22.75	35.75	23.50	36.50
PROSPELL	19.50	29.50	20.75	30.75	21.50	31.50
PROMERGE (ROM=PROMERGE PLUS)	19.50	29.50	20.75	30.75	21.50	31.50
MAXAM * THE BEST! *	21.50	34.50	22.75	35.75	23.50	36.50
MAXAM 1 1/2 * NEW *	N/A	24.50	N/A	25.75	N/A	26.50
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ROMBO ROMBOARD UK – £31.00 EUROPE – £33.00 REST OF THE WORLD – £35.00

DMP 2000/2160/3000/3160

The printer buffer presently in the DMP 200/3000 series is a 2K RAM. Most of this RAM is used by the printer's operating system leaving an average 1/2K as buffer space. Our upgrade kit contains a new static RAM chip which will increase the printer buffer by 6K (about 4 pages of text). This upgrade allows all Download Characters to be re-defined allowing the user to design special characters for use with scientific and other programs. The kit is supplied with full pictorial instructions to allow the amateur to carry out his own modification (the DMP2160 takes about 7 minutes). If you don't think you are up to it your local TV shop can do the job in approximately 15 minutes

UK £12.50 – EUROPE £13.75 – R. of W. £14.50

FIRETRANS

This utility will transfer a number of FIREBIRD programs from tape to disc automatically including most opening screens in full colour. FIRETRANS will work equally well from tape but will be more convenient to use if converted to disc with SAMSON/Transmat. It will transfer WILLOW PATTERN, RUNESTONE, CHIMERA, GUNSTAR, PARABOLA, REALM, SPIKY HAROLD, BOOTY, DON'T PANIC, GUNFRIGHT, STARGLIDER, NINJA MASTER, HELICOPTER, and some version of THRUST, HARVEY HEADBANGER and BOMBSCARE.

TAPE:- UK £5.00 – EUROPE £6.25 R. of W. £7.00
DISC:- UK £8.50 – EUROPE £9.75 – R. of W. £10.50

NEW COMPACTOR NEW

COMPACTOR will allow you to load a standard 17K screen, set the mode, border and ink colours and then save it as a compressed screen containing its own mode and ink colour information. Most screens compact down to an average of 9K which is an enormous saving on disc space. Loading time of compressed screens is also proportionately reduced.

TAPE:- UK £5.00 – EUROPE £6.25 R. of W. £7.00
DISC:- UK £8.50 – EUROPE £9.75 – R. of W. £10.50

TRANSIT

TRANSIT is a disc-to-disc file copier which handles file upto 40K in length in one pass. It will copy from drives A-A, A-B, B-B and B-A making an ideal utility for use with 5 1/4" second drive.

TAPE:- UK £4.50 – EUROPE £5.25 – R. of W. £6.50
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UTILITY DISC No. 1

This utility disc contains 5 programs, all menu driven. They are SAMSON, TRANSIT, QCLONE, VIEWTEXT and the fast disc FORMATTER.

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NEW NIRVANA NEW

Have you tried backing up your original expensive disc software and failed? Use NIRVANA before its too late! NIRVANA (meaning enlightenment) is an extremely powerful disc handling utility which has the following features: Disc to disc back-up copier which will handle most of the commercially protected discs available today. File copier for individual files. Disc formatter, much easier to use than CPM. Change file attributes. Erase files. Change filenames. Will handle all disc drive combinations

DISC:- UK £14.99 – EUROPE £16.25 – R. of W. £17.00

NEW SHAREPLAY NEW

THE STOCK MARKET SIMULATION
(All CPC's)

This is a serious educatinal program for 1 to 6 players and provides all the enjoyment of playing the stockmarket without any risk of personal bankruptcy!! Each player can buy and sell shares and the target is the first to reach £1,000,000. The program includes a stockholding portfolio listing the shares purchased, their number, cost and market value. Bank balances are also shown. Graphical representation of market fluctuations are given in the form of a bar graph. Also included is a high score table. Scores are automatically saved at the end of each session.

DISC:- UK £14.99 – EUROPE £16.25 – R. of W. £17.00

NEW WORDSEEK NEW

THE WORDSEARCH PROGRAM
(All CPC's)

This educational program will tax even the most agile mind. The aim is to find the hidden words in a 15 by 15 puzzle within a set time limit of 30 seconds. The time limit is extended for every correct letter of the current word found. You may create your own puzzle consisting of up to 10 words which can be saved to disc and used at any time. You may only retain one puzzle at a time but if you choose not to use your own puzzle then the program will randomly select one form the library of 50 on the disc. All of the puzzles in the library are made up of 10 words each consisting of 1x8 letter, 1x7 letter, 2x6 letter, 3x5 letter, 2x4 letter and 1x3 letter words. This ensures equal difficulty regardless which one is randomly loaded. The program contains a print option (for Epson compatible printers) allowing a hard copy to be made of any puzzle created. Keyboard/Joystick options are also available.

DISC ONLY – U.K. £14.99 – EUROPE £16.25
REST OF THE WORLD £17.00

NEW TUNESMITH NEW

TUNESMITH is a simple to use sound utility which allows you to use the keyboard to play and record your tunes. No knowledge of music or Amstrad sound commands is required all you need to be able to do is whistle the tune you play or record. The octave and period of notes is variable and the program includes synthesizer and vibrato effects. **TUNESMITH** will save any tune as a basic file which can be RUN, CHAINED or MERGED into your own program.

DISC:- UK £14.99 – EUROPE £16.25 R. of W. £17.00

SAMSON

SAMSON has been developed by us to transfer not only the normal programs but also many of todays where the code is much longer. **SAMSON** differs in many ways from other Tape-to-Disc utilities, the main differences being: * SAMSON retains original file suffixes (SAMSON.SCN will be saved as SAMSON.SCN) * Improved file relocation method * Elaborate Tape-read/Disc write system which reduces Tape Motor, Slave Replay and Disc Drive Motor wear substantially. * A large reduction in tape transfer time is also achieved in all but a few cases * NEW "SPLIT" option for todays longer games (we will be using this option in future routines) * All file information is displayed on screen and can be echoed to your printer if needed. SAMSON also transfer itself to disc.

TAPE:- UK £7.50 – EUROPE £8.75 – R. of W. £9.50
DISC:- UK £11.50 – EUROPE £12.75 – R. of W. £13.50

CHARACTER DESIGNER

(All CPC's)

* **REDEFINE YOUR PRINTER DOWNLOAD CHARACTERS**
* **REDEFINE THE COMPUTER SCREEN FONT**
* **REDEFINE ANY/ALL KEYBOARD KEYS (ASWERTY)**
* **DESIGN SPECIAL SCIENTIFIC CHARACTERS/FONTS**

Takes all the hard work out of character designing making it a pleasure. The printer part of the program will only work if your printer is capable of DOWNLOADING and is EPSON compatible – see your printer manual. Works with 7-bit or 8 bit output (8-bit port). All the designing is done "On-Screen" so you can see exactly what you are doing. You can save your newly designed characters to disc and reload them at any time into a basic program and into most Word-Processors. The program also allows the user to redefine any or all of the keys on the keyboard. This feature will be useful for those who require an ASWERTY keyboard. The disc also contins twelve sample fonts for experimentation

TAPE:- UK £7.99 EUROPE £9.25 – R. of W. £10.00
DISC:- UK £11.99 – EUROPE £13.25 – R. of W. £14.00

FAST FORMATTER

The FASTFORMATTER will format one side of a disc in approx. 30 seconds with the choice of DATA, VENDOR or SYSTEM and its much easier then using your CPM disc.

TAPE:- UK £4.50 – EUROPE £5.25 – R.of W. £6.50
DISC:- UK £8.00 – EUROPE £9.25 – R.of W. £10.00

Please send your cheque (£ Sterling) Eurocheque OR UK P.O. to
GOLDMARK SYSTEMS, 51 COMET ROAD, HATFIELD, HERTFORDSHIRE, AL10 0SY. ENGLAND
Please write or telephone 07072 71529 for full brochure.

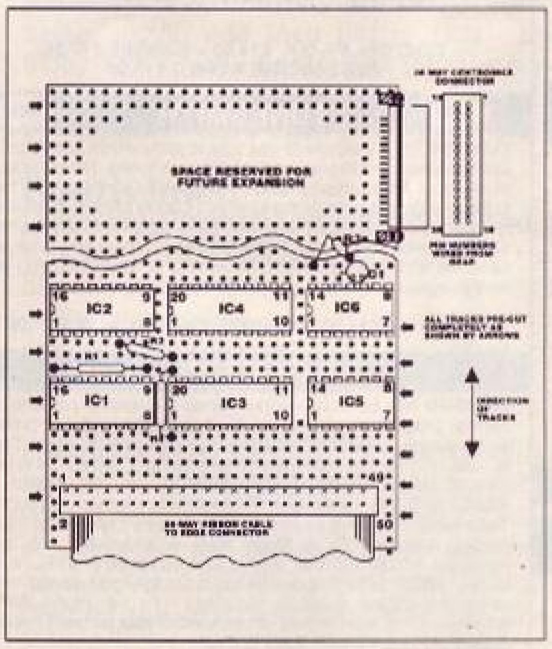
SOLDERING ON

Paul Calter presents another very useful project – an 8 bit printer port

This project is an 8 bit data port, which would normally be used as a printer driver. It's possible, though, to use it to communicate with any device which uses an 8-bit interface with strobed output and a high BUSY input.

The main advantage of this project over the standard 7 bit interface is that you can send codes greater than 127 without any problem – useful for sending IBM control codes, and also for Epson screen dump programs that use quadruple density graphics.

The end result is that what comes out of your printer looks even better.



Description

The circuit consists of only six chips. IC1 and IC2 (a 74-133 and 74-138) decode the address bus, and, together with $\overline{IORQ}$, produce two signals, $\overline{SEL0}$ and $\overline{SEL1}$. These are equivalent to I/O addresses &FBF8 and &FBF9.

$\overline{SEL0}$ and $\overline{SEL1}$ are gated with $\overline{WR}$ or $\overline{RD}$ on $\overline{IC5}$ (a 74-02) to give three signals.

1. IC-5 pin 13 Causes a byte to be read, via IC-4, bit 0 of which indicates the state of printer BUSY.
2. IC-5 pin 10 Causes a byte to be written into IC-5, (74-273), an 8-bit latch.
3. IC-5 pin 4 This causes IC-6, a one shot timer, to produce a 50 uS strobe pulse (simplifies the program code.)

I/O Address Table

	WR	RD
Address &FBF8	strobe	busy
Address &FBF9	data	n/a

Wire List

Pin	Amstrad Conn. (A)	IC1	IC2	IC3	IC4	IC5	IC6	Centronics Conn. (C)
1	X	A-3	A-18	R-4	X	1-6	C-1	6-1
2	GND	A-4	A-17	C-2	X	5-3	X	3-2
3	1-1	A-5	A-16	A-26/4-3	3-3	A-8/5-2	GND	3-5
4	1-2	A-6	A-31	A-25	X	6-5	GND	3-6
5	1-3	A-7	1-9/R1	C-3	X	2-15/5-12	5-4	3-9
6	1-4	5-1	R2	C-4	X	5-9	X	3-12
7	1-5	A-9	X	A-24	X	GND	GND	3-15
8	5-3	GND	GND	A-23	X	2-14	X	3-16
9	1-7	2-5	X	C-5	X	5-6/A-33	X	3-19
10	1-10	A-10	X	GND	GND	3-11	C1-	X
11	1-11	A-11	X	5-10	X	A-32	C1+/R3	4-17
12	1-12	A-12	X	C-6	X	5-5	X	
13	1-13	A-13	X	A-22	X	4-19	X	
14	1-14	A-14	5-8	A-21	X	+5V	+5V	
15	1-15	A-15	5-5	C-7	X			
16	2-3	+5V	+5V	C-8	X			
17	2-2			A-20	C-11			
18	2-1			A-19	X			
19	3-18			C-9	5-13			
20	3-17			+5V	+5V			
21	3-14							
22	3-13							
23	3-8							
24	3-7							
25	3-4							
26	3-3							
27	+5V							
28	X							
29	X							
30	X							
31	2-4							
32	5-11							
33	5-9							

This wire-list indicates which pins are connected to which. For example, the list says that IC2 pin 5 should connect to 1-9. Looking at IC1 pin 9, you can see it connects to 2-5, which is IC2 pin 5.

Where there are two numbers, for example IC5 pin 3, that pin connects to both pins listed, in this example A-8 as well as 5-2.

X means no connection to that pin. Pins 34-50 of the Amstrad connector should be left unconnected, as well as pins 12-18 and 30-36 of the Centronics connector. Pins 19-29 of the same should be connected to GND (0V).

Driving the port

The software provided works with Basic, and with any software using the standard Amsdos calls. Software which has its own driver routines (e.g. CPM and most word-processors) need to be patched to use this port. It's regrettable, but necessary for any piece of replacement hardware.

Construction

The circuit is built on Vero-Q stripboard, which has pre-cut etches especially made for IC use. A choice of edge connecters is offered. If the cheaper board mounted version is used, the components have to be placed far enough up the board so as not to interfere with the rest of the keyboard. Also, it should be noted that the board is then vertical, and could obscure part of the screen.

First stage of construction involves soldering the chip sockets. These are fairly necessary for the project, especially for the 74-133 which is a CMOS chip and very vulnerable to static electricity.

Next solder in the 'discrete' components. That's the technical term for resistors, diodes, capacitors, potentiometers – basically everything that's not a chip or transistor. Make sure that you get C1 the right way round – use previous issues and deter-

mine which is the anode (positive leg).

The links are made of wire wrap. This is used a lot in prototypes/hobby use, and is necessary due to the large number of links in the project – using standard wire makes the project more difficult, because it's a little thick and unwieldy for this sort of job.

Once you have made all the links it's a good idea to check them properly using a multimeter, a device that can measure current, resistance and voltage between any two points on a circuit. A good link has a resistance close to 0 Ohms. If you don't have a friend from whom you can borrow one, then Maplin do a reasonable multimeter for £6.95 (code YJ06G). If you're intent on dabbling in electronics it makes sense to get one.

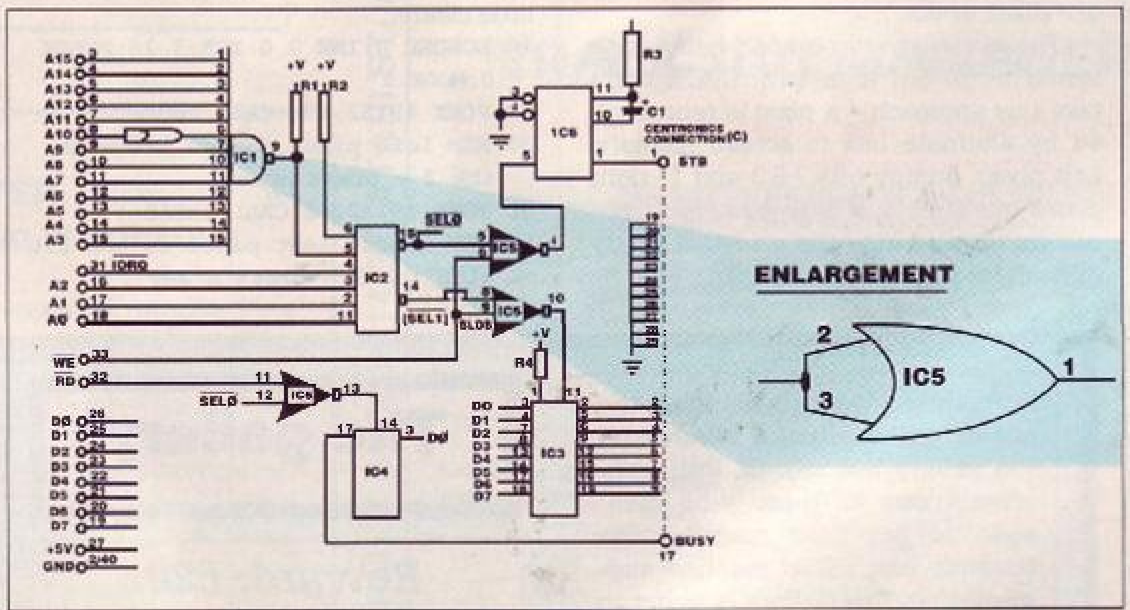
When you're happy about the connections, carefully insert the chips. If you can, try and touch a water pipe or similar metal structure, to earth yourself. That way any buildup of static electricity on you is drained and won't damage the chips.

And finally, before you switch on, do make sure that the IC's are connected with the dimple the right way round!

Parts List

Part	Description	Maplin Order	Unit Price (£)	Quant.
IC1	74HC133	UB30H	0.25	1
IC2	74LS138	YF53H	0.50	1
IC3	74LS273	YH00A	0.90	1
IC4	74LS241	YFBBV	0.92	1
IC5	74LS02	YF02C	0.25	1
IC6	74121	QX73Q	0.51	1
R1/2/4	4K7 Ohm Resistor	M4K7	0.03	3
R3	150 Ohm Resistor	M150R	0.03	1
C1	1 uF Capacitor	YY31J	0.10	1
	14 pin IC Socket	BL18U	0.11	2
	16 pin IC Socket	BL19V	0.11	2
	20 pin IC Socket	HQ77J	0.18	2
	Vero-Q Stripboard	HQ48C	2.80	1
	36 Way Centronics conn.	FV87U	2.95	1
	50 Edge conn.	JC01B	1.50	1
	(or 50 way cable	FT66W	6.95)	
	Printer cable M/M	JC14Q	8.95	1
	Spool wirewrap wire	BL83E	1.98	1

Contact: Maplin Electronics, ☎0702 554155 PO Box 3, Rayleigh, Essex, SS6 8LR.



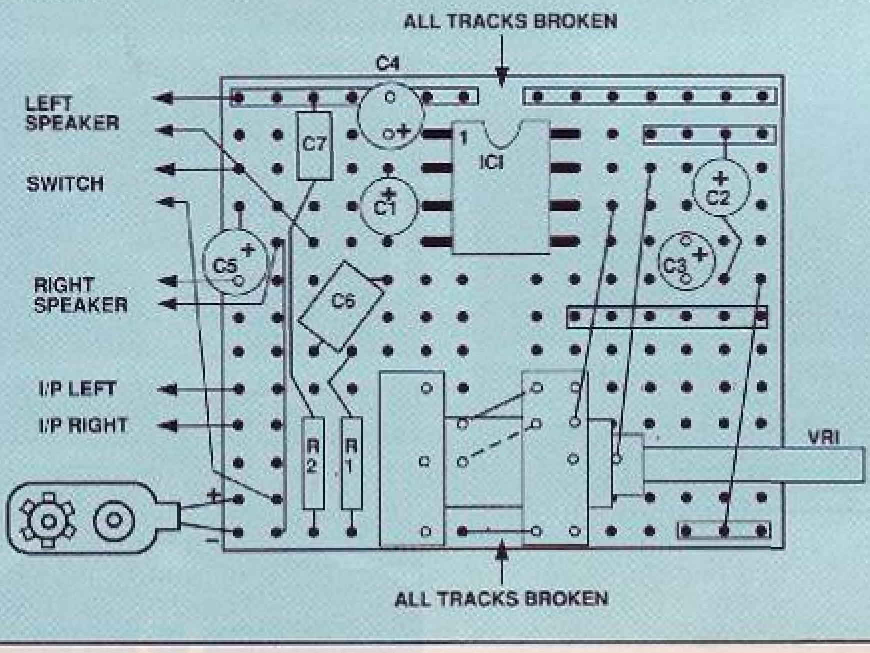
Use it!

When you have the device powered up, you have to type in and run the listing before you can use the port. Oh, and you need a new printer cable, Centronics to Centronics rather than the standard Amstrad edge connector/Centronics lead. Have fun.

```
10 MEMORY &A5FF:RESTORE
20 FOR x=&A600 TO &A658
30 READ a$:y=VAL("&"+a$)
40 POKE x,y
50 NEXT
60 CALL &A600
70  DATA 3E,C3,21,28,BD,11,00,A6
80  DATA CD,52,A6,11,27,A6,CD,52
90  DATA A6,11,2D,A6,CD,52,A6,11
100 DATA 37,A6,CD,52,A6,21,F1,BD
110 DATA 11,43,A6,CD,52,A6,C9,C5
120 DATA CD,43,A6,C1,C9,C5,01,F8
130 DATA FB,ED,48,CB,41,C1,C9,C5
140 DATA 01,F9,FB,ED,79,0B,ED,79
150 DATA C1,37,C9,01,32,00,CD,2D
160 DATA A6,20,EC,10,F9,0D,20,F6
170 DATA B7,C9,77,23,73,23,72,23,C9
```

Who, me?

Grovelling apologies for last month's wiring diagram. Here is how it *should* have looked – honest!



All aboard!

No excuses – if you have a project, we want it *now!* We prefer, small, easy-to-build – and cheap – designs, but we consider everything. And we pay too: between £40-£60 according to quality and presentation.

Its a good idea to include full diagrams. Our skilled and and dedicated art staff redraw them (*incorrectly*), so don't worry if it isn't brilliant – make it clear and easy to understand. Send your Cray 2 second processor to: *Hardware Projects, Amstrad Action,* 4 Queen St, Bath BA1 1EJ.

THE LOOK

An introduction to graphics – part two

Well, did anyone manage to decipher last month's conundrum? The byte-to-pixel arrangement is very strange indeed on the Amstrad, so I'd surprised if anyone did manage it without help.

Mode 0 is perhaps the easiest to describe. A byte of screen memory (which runs from 49152 to 65535 – remember?) can be represented in binary form as eight bits, or switches, which can contain either a 1 or 0, on or off.

This screen mode is used a lot for games, because it has 16 colours. These are numbered from 0-15, and it just so happens that in binary this takes four bits, or switches. So it would seem that there is room to represent two colours in one byte: each colour would be used for one pixel, or dot.

The obvious way of using half a byte would be to cut it in two. CPC's don't take this approach – a pixel is represented by alternate bits in screen memory. Left pixels occupy bits 7,5,3 and 1; right pixels bits 6,4,2 and 0. So putting screen colours directly onto the screen is pretty difficult for your average human.

To illustrate, try this short listing:

```
10 BORDER 0:INK 0,0:INK 15,26:PAPER
   0:MODE 0
20 POKE 49152,170:CALL &BB18
30 REM Left pixel is now lit
   with ink 15 - press a key
40 POKE 49152,85:CALL &BB18
50 REM Right pixel is now lit
   with ink 15 - press a key
```

Mode 1 works along very similar lines. This only has four colours, numbered 0-3. A value of up to four takes just two bits to represent, so four pixels (four times two is eight – eight bits in a byte) can be represented in one byte.

From left to right, the bits used for inks are: 7 + 3, 6 + 2, 5 + 1 and 4 + 0. Weird isn't it? This might make things a little clearer.

```
10 BORDER 0:INK 0,0:INK 3,26:PAPER
   0:MODE 1
20 POKE 49152,136:CALL &BB18
30 REM Left pixel is now lit with
   ink 3 - press a key
40 POKE 49152,68:CALL &BB18
50 REM Middle left pixel is now lit
   with ink 3 - press a key
60 POKE 49152,34:CALL &BB18
70 REM Middle right pixel is now
   lit with ink 3 - press a key
80 POKE 49152,17:CALL &BB18
90 REM Right pixel is now lit with
   ink 3 - press a key
```

Take my breath away

Looking at this system for graphics, you might well look at your Amstrad in a new light. It has to process all of those ink changes, and put the right bit pattern onto the screen for the right ink.

Let's take a look at some Locomotive Basic commands that do interesting things to the screen.

- **PRINT**: standard way of putting characters onto screen. It's generally followed by some characters held within quote marks, e.g. **"This is a PRINT statement"**.
- **LOCATE**: moves current position for printing to the two values immedietely after the statement. Like so: 1,1 moves the print position to the top left corner of the screen.
- **INK**: changes colour in a given pen. Flashing colours can be selected by inserting two colour values rather than just one.
- **BORDER**: as above, but for border colour.
- **PEN**: selection of the foreground colour to print with.
- **PAPER**: as above, but for printing background colour.

The gallery

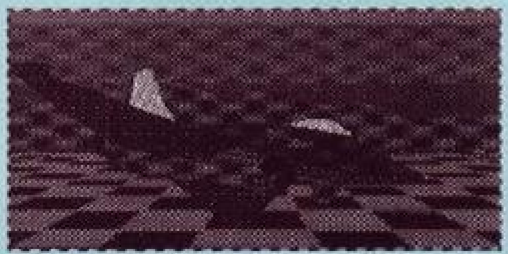
I certainly wasn't planning on the postal strike when I announced the gallery last month. Still, congratulations to those who managed to get their contributions through, and initial reaction suggests that *The Gallery* is going to be very popular indeed. Watch this space...

Reward: £20

Mark all entries with your name and address, state what art package was used (even better, do a Basic loader to set up the screen colours) *then* post them to: *The Look, AA*, 4 Queen St, Bath BA1 1EJ.

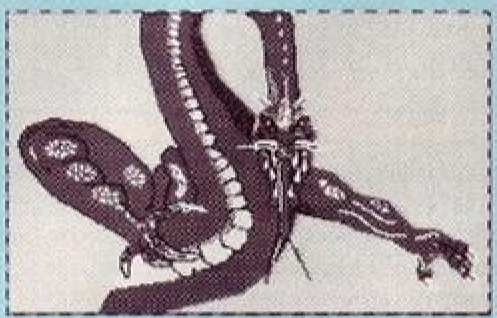
● Dragon – A pretty contribution done with *Smart II*. Mike Davies, Normanton





● EuroFighter – sometimes detail isn't as important as shape. J. Murray, Rayleigh

● Dragon, Madonna, Bike – A very good collection indeed. Well done C. S. Coles of Weymouth, you win £20



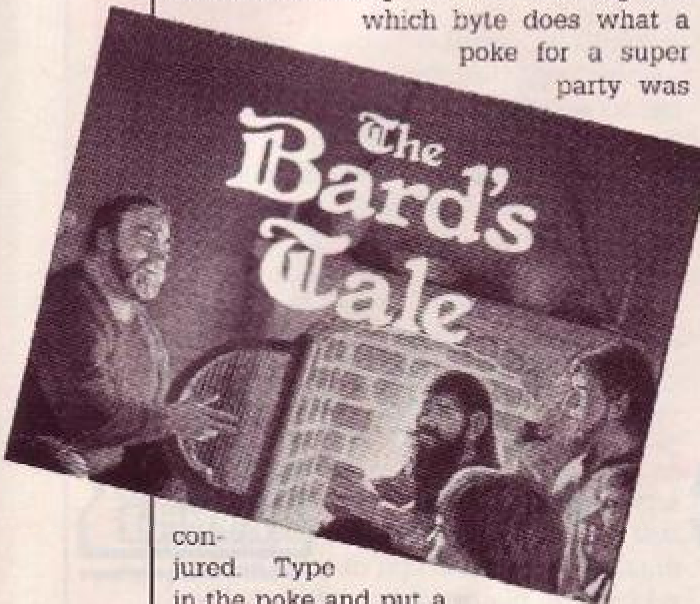




CHEAT MODE

Gets the toughest games going!

The Bards Tale



After delving deeply into the cassette version of the game and working out which byte does what a poke for a super party was conjured. Type in the poke and put a tape with a saved party in the cassette deck. Run the poke and the party is loaded and modified. Press a key to save the party back to tape and you find your characters are considerably more powerful, possessing lots of hit points, magic points, experience and gold. It also make all spell casters capable of casting the four types of magic at seventh level.

The levels of the characters are not altered – neither are the statistics – but that's simple to rectify. Go to the Review Board and choose Advancement. You have ridiculous amounts of experience and so you can make the character keep going up levels until you get bored. This further increases your magic points, hit points and statistics. Statistics level out at 18 for each one and won't increase beyond that.

If you want to enter the catacombs beneath the temple speak to the priest and say **'TARJAN'**.



```
1 ' The Bards Tale - tape
2 ' By Gary Barrett
3 ' Amstrad Action Nov 88
10 MEMORY &7FFF
20 q=230
30 RESTORE
40 FOR n=&8000 TO &80C3 STEP 6
50 t=0
60 FOR m=0 TO 5
70 READ a$
80 a=VAL("&"+a$)
90 t=t+a
100 POKE n+m,a
110 NEXT m
120 READ b$
130 b=VAL("&"+b$)
140 IF b<>t THEN 220
150 q=q+10
160 NEXT n
170 PRINT"Insert party tape"
180 PRINT"and Press any Key"
190 CALL &BB18
200 CALL &8000
210 STOP
220 PRINT"Error in Data line ";q
230 DATA 3E,2C,21,00,90,11,12C
240 DATA 40,00,CD,A1,BC,21,28B
250 DATA E1,03,11,44,03,3E,17A
260 DATA 16,CD,A1,BC,06,06,24C
270 DATA 21,C6,04,C5,E5,11,2A6
280 DATA 38,00,19,06,00,7E,0D5
290 DATA FE,01,28,75,FE,02,29C
300 DATA 28,71,FE,03,28,6D,22F
310 DATA FE,04,28,69,78,32,23D
320 DATA C3,80,E1,E5,11,14,32E
330 DATA 00,19,3E,01,77,11,0E0
340 DATA 10,00,19,77,E1,11,192
350 DATA 30,00,E5,19,16,05,149
360 DATA 3A,C3,80,87,06,04,20E
370 DATA 80,47,72,23,10,FC,268
380 DATA 3A,C3,80,FE,00,28,2A3
390 DATA 0F,3E,07,E1,E5,11,22B
400 DATA 40,00,19,06,04,36,099
410 DATA 07,23,10,FB,E1,C1,2D7
420 DATA 11,65,00,19,10,A3,142
430 DATA 21,AB,80,CD,A1,80,33A
440 DATA CD,18,BB,21,00,90,251
450 DATA 11,40,00,3E,2C,CD,188
460 DATA 9E,BC,06,19,76,10,1FF
470 DATA FD,21,E1,03,11,44,257
480 DATA 03,3E,16,CD,9E,BC,27E
490 DATA C9,06,02,18,93,7E,1FA
500 DATA FE,00,C8,CD,5A,BB,3A8
510 DATA 23,18,F6,50,72,65,258
520 DATA 73,73,20,61,6E,79,24E
530 DATA 20,6B,65,79,20,74,1FD
540 DATA 6F,20,73,61,76,65,23E
550 DATA 0D,0A,00,00,00,00,017
```

POKE METHODS ON TAPE

Here's how to input most *Cheat Mode* tape pokes – the instructions for each poke tell you which of the two to use. 664 and 6128 owners: first type |tape.

METHOD 1

Rewind the game tape to the beginning, type in the poke listing and then type RUN and press the Enter key. (Don't use the key marked CTRL or Control, or the poke won't work.) Press the Play key on the cassette deck, then any key on the main keyboard - spacebar does nicely. The tape should now play through as normal.

METHOD 2

Skip the first bit of the game program. To do this, rewind the game tape to the beginning; type in the listing; now type CAT and press Enter. Start the tape by pressing Play and then any key. Soon you'll see the message: 'Found something Block 1'. It doesn't matter what the something is, and it varies from game to game. If the *Cheat Mode* instructions just tell you to skip the first block, stop the tape here.

If the instructions tell you to skip things, stop the tape when the 'Found' message comes up for the last thing you're trying to skip.

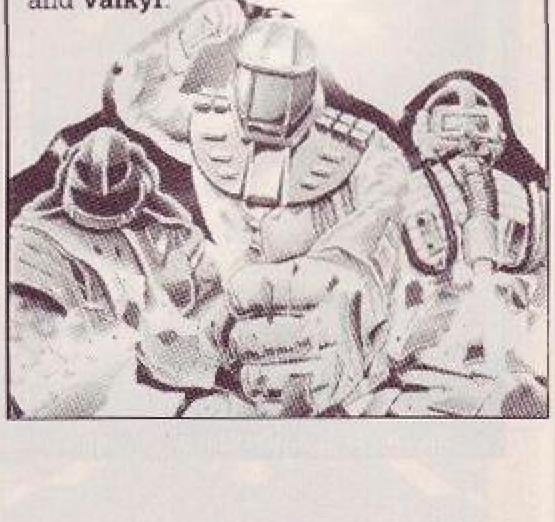
Once you've stopped the tape, press Escape, type RUN and press Enter. Now press Play on the tapedeck and any key on the keyboard to start the tape.

VENOM

VENOM STRIKES BACK

Gremlin's third Mask game is split into sections, and passwords are needed to move between them.

R.N. Carter of Boston has supplied the passwords: **Mayhem**, **Transmogrify** and **Valkyr**.



Cholo

Firebird's game of robotic exploration gets hacked to pieces by **Julian Page** of Shrewsbury. Type in the poke, RUN it with the *Cholo* disk in the drive and follow the on-screen prompts.

```
1 'Cholo - disk
2 'by Julian Page
3 'Amstrad Action Nov 88
10 DATA 21,10,40,11
20 DATA 50,03,01,B0
30 DATA 00,D5,ED,B0
40 DATA C9,48,69,21
50 DATA 21,00,BE,36
60 DATA 82,DD,7E,00
70 DATA 32,4C,03,CD
80 DATA D4,BC,22,4D
90 DATA 03,79,32,4F
100 DATA 03,21,E5,03
110 DATA DF,4D,03,21
120 DATA EF,03,11,00
130 DATA 40,06,04,CD
140 DATA 77,BC,EB,CD
150 DATA 83,BC,CD,7A
160 DATA BC,3E,AF,32
170 DATA A7,00,21,8B
180 DATA 03,22,C2,00
190 DATA C3,59,00,3A
200 DATA 4C,03,47,AF
210 DATA 67,6C,CB,40
220 DATA 28,08,3E,18
230 DATA 32,38,AC,32
240 DATA 84,AD,CB,48
250 DATA 28,04,AF,32
260 DATA D4,77,CB,50
270 DATA 28,05,3E,C9
280 DATA 32,CC,92,AF
290 DATA CB,58,28,03
300 DATA 32,E8,AC,CB
310 DATA 60,28,0B,3E
320 DATA 77,32,4E,9F
330 DATA 3E,3E,32,4C
340 DATA 9F,AF,CB,68
350 DATA 28,09,21,18
360 DATA 14,22,84,A4
370 DATA 21,00,00,CB
380 DATA 70,28,03,22
390 DATA BF,A9,CB,78
400 DATA 28,04,3D,32
410 DATA 67,AC,C3,00
420 DATA 53,2D,00,37
430 DATA 00,01,04,08
440 DATA 01,03,00,44
450 DATA 49,53,43,00
460 FOR X=&4000 TO &40B3
470 READ A$:A=VAL("&"+A$)
480 POKE X,A:C=C+A
490 NEXT X
500 IF C=&3E75 THEN 520
510 PRINT"DATA ERROR":STOP
520 MODE 1:INK 0,0:PEN 2
530 INK 1,11:INK 2,26:C=1
540 INK 3,24:V=0:DEFSTR A,B
550 A="TRAVEL ON WATER
560 GOSUB 770
570 A="NO RADIATION DAMAGE
580 GOSUB 770
590 A="IMMUNE TO ATTACKS
600 GOSUB 770
610 A="ENEMY CAN'T SEE YOU
620 GOSUB 770
630 A="STUN ENEMY- 1 SHOT
640 GOSUB 770
650 A="NO PASSWORD NEEDED"
660 GOSUB 770
670 A="NO ACCESS DENIAL
680 GOSUB 770
690 A="NO SELF-DESTRUCT
700 GOSUB 770
710 PRINT"INSERT CHOLO
720 PRINT"DISC,PRESS A
730 PRINT"KEY!
740 CALL &BB03:CALL &BB06
750 CALL &4000,V
760 END
770 CLS:PRINT A;" Y/N ?
780 B="":WHILE B=""
790 B=UPPER$(INKEY$)
800 WEND
810 V=V OR C*-(B="Y")
820 C=C*2:RETURN
```



Impact

Neil MacDougall of Chipping Sodbury has hacked into the disk version of Audiogenic's *Rave* game. It gives you either infinite lives or an extra one every 10,000 points. Type in the poke and run it with the *Impact* disk in the drive.

```
1 ' Impact - disk
2 ' By Neil MacDougall
3 ' Amstrad Action Nov 88
10 MEMORY &3E80
20 LOAD"usrint.bin",37550
30 POKE &9347,&80
40 POKE &9348,&BE
50 x=&BE80
60 READ a$
70 IF a$="**" THEN CALL 37550
80 a=VAL("&"+a$)
90 POKE x,a
100 x=x+1
110 GOTO 60
120 REM Life every 10000 points
130 DATA 21,00,00,22,e1,6b
140 DATA 22,e2,6b
150 REM Infinite lives
160 DATA af,32,94,6f,3e,c3
170 DATA 32,95,6f
180 REM must leave in
190 DATA c3,fc,9c,**
```



He's also supplied the passwords to take you to the higher levels.

Level	Password
11	AMEN
21	BOOK
31	CROW
41	DOOR
51	EDGE
61	FALL
71	GATE
81	USER

Metal Army

Phil Howard has been at it again, this time giving Players' budget game infinite power and lives. **(Method 1)**

```
1 ' Metal Army-tape
2 ' By Phil Howard
3 ' Amstrad Action Nov 88
10 DATA 21,0a,ad,36,c3,23
20 DATA 36,0e,23,36,be,c3
30 DATA 00,ac,c4,14,ac,3e
40 DATA 00,32,8f,87,32,62
50 DATA 73,fb,c9,21,7f,41
60 DATA 36,8f,21,cc,41,36
70 DATA b3,21,2c,42,36,f9
80 DATA c3,05,40
90 MEMORY &3000:y=0
100 FOR x=&be00 TO &be2c
110 READ a$:a=VAL("&"+a$)
120 POKE x,a:y=y+a:NEXT
130 IF y<>&1116 THEN 160
140 LOAD""
150 CALL &be1b
160 PRINT "DATA ERROR!"
```

JOE BLADE

Mike Wong of Sale has hacked into Players' budget game to give you infinite time, keys and invulnerability. Bombs are also activated if you don't solve them and you can choose the number of hostages and bombs. **(Method 1)**

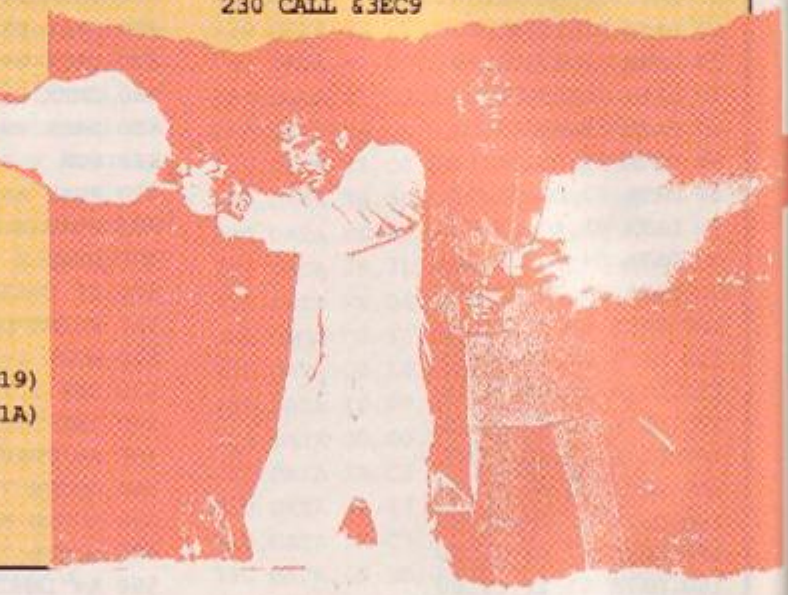


```
1 ' Joe Blade-tape
2 ' By Mike Wong
3 ' Amstrad Action Nov 88
10 MEMORY &3FFF:MODE 1
20 n=&BE00
30 READ a$
40 IF a$="*" THEN 130
50 IF a$<>"xx" THEN 80
60 INPUT"No. of bombs (1-6)";a
70 a=a+&30:GOTO 120
80 IF a$<>"yy" THEN 110
90 INPUT"No. of hostages (1-6)";a
100 GOTO 70
110 a=VAL("&"+a$)
120 POKE n,a:n=n+1:GOTO 30
130 LOAD"!"
140 POKE &417F,&8F
150 POKE &41CC,&B3
160 POKE &422C,&F9
170 CALL &4005
180 REM data
190 DATA 3e,c3,32,4c
200 DATA ae,21,0e,be
210 DATA 22,4d,ae,c3
220 DATA 00,ac,af
230 REM inf ammo
240 DATA 32,5d,10
250 REM inf time
260 DATA 32,88,15,32,89,15
270 REM inf keys
280 DATA 32,84,12
290 REM activate bombs
300 DATA 32,f7,13
310 REM inulnerability
320 DATA 32,8e,0e,32,b6,0e
330 DATA 21,00,00,22,8f,0e
340 DATA 22,b7,0e
350 REM no. of bombs
360 DATA 3e,xx,32,16,0d
370 REM no. of hostages
380 DATA 3e,yy,32,10,0d
390 REM leave this
400 DATA c9,*
```

MIAMI VICE

Mike Wong has also had a go at Crocket and Tubbs to give them infinite energy in the disk version. Run the poke with the *Miami Vice* disk in the drive.

```
1 ' Miami Vice-disk
2 ' By Mike Wong
3 ' Amstrad Action Nov 88
10 p=&BE80
20 DATA 2a,9a,be,22
30 DATA 19,b9,21,92
40 DATA be,22,cd,a1
50 DATA cd,18,b9,c3
60 DATA 60,a1,3e,a7
70 DATA 32,52,03,c3
80 DATA 00,01
90 FOR n=0 TO 25
100 READ a$
110 a=VAL("&"+a$)
120 POKE n+p,a
130 NEXT
140 POKE &BE9A,PEEK(&B919)
150 POKE &BE9B,PEEK(&B91A)
160 POKE &B919,&80
170 POKE &B91A,&BE
180 MEMORY &3EC8
190 PRINT"Insert MIAMI ";
200 PRINT"VICE disc..."
210 CALL &BB18
220 LOAD"miami"
230 CALL &3EC9
```



STAR WARS.

James Walker of Moortown has sent in this poke for infinite shields in Domark's shoot-em-up. Skip past the first file. **(Method 2)**

```
1 ' Star Wars-tape
2 ' By James Walker
3 ' Amstrad Action Nov 88
10 MODE 0
20 MEMORY &1fff
30 BORDER 0
40 FOR s=0 TO 15
50 READ a:INK s,a
60 NEXT
70 LOAD"!",&c000
80 LOAD"!",&2000
90 POKE &63da,0
100 FOR s=0 TO 15
110 INK s,0:NEXT
120 LOAD"!",&c000
130 POKE &d1a3,0
140 CALL &c1e6
150 DATA 0,26,6,20,26,10
160 DATA 2,11,26,13,15
170 DATA 23,26,24,16,23
```



Nebulus

Hewson's game of tower demolition gets infinite lives and time, courtesy of **Mike Wong**. (Method 1)

```
1 ' Nebulus-tape
2 ' By Mike Wong
3 ' Amstrad Action Nov 88
10 DATA 00,02,0a,0d
20 DATA 09,06,0b,14
30 DATA 0c,03,1a,0f
40 DATA 0a,18,14,12
50 DATA 21,00,c0,11
60 DATA 00,40,cd,71
70 DATA 00,21,00,01
80 DATA 11,00,80,cd
90 DATA 71,00,21,00
100 DATA c0,11,54,3b
110 DATA cd,71,00,af
120 DATA 32,ef,c4,32
130 DATA c7,c4,f3,21
140 DATA 00,c0,11,00
150 DATA 81,01,54,3b
160 DATA ed,b0,c3,00
170 DATA 01,3e,87,c3
180 DATA a1,bc
190 FOR n=0 TO 15
200 READ a$
210 a=VAL("&"+a$)
220 INK n,a:NEXT
230 MODE 0:BORDER 6
240 FOR n=&40 TO &75
250 READ a$
260 a=VAL("&"+a$)
270 POKE n,a:NEXT
280 CALL &40
```

Amstrad Action? Amstrad Action!

Amstrad CPC Games

		cass	disc
3D Voice Chess	C.P. Software	10.23	12.60
6 Pack Vol. 3	Elite	7.86	11.81
A.T.F.	Digital Int	7.07	11.02
Acrojet	Microprose	7.86	11.81
Aliens (U S Version)	Activision	7.89	11.84
All New Blockbusters	Domark	6.28	11.81
All Stars	The Edge	7.10	
Alternate World Games	Gremlin	8.49	12.74
Annals of Rome	P S S	10.23	14.18
Arcade Force Four	U S Gold	8.49	16.99
Arkanoid	Imagine	7.07	11.81
Backgammon	C.P. Software	4.70	7.86
Bad Cat	U S Gold	8.49	12.74
Battle of Britain	P S S		7.86
Battlefield Germany	P S S	10.23	14.18
Beyond Ice Palace	Elite	7.89	11.84
Bionic Commandos	U S Gold	8.49	12.74
Blood Brothers	Gremlin	8.49	12.74
Blood Valley	Gremlin	8.49	12.74
Brian Clough Football	C D S	11.84	14.21
Bridge Player 3	C P Software	10.23	12.60
Bubble Bobble	Firebird	7.07	11.81
Buggy Boy	Elite	7.86	11.81
Bulls-Eye	Domark	6.28	
California Games	U S Gold	8.49	12.74
Captain Blood	Infogrames	7.86	11.81
Championship Sprint	Activision	7.89	11.84
Charlie Chaplin	U S Gold	8.49	12.74
Chubby Gristle	Grand Slam	7.86	11.81
Cluedo	Leisure Genius	7.86	11.81
Colossus Bridge	C D S	9.44	11.81
Colossus Chess 4	C D S	7.86	11.02
Colossus Mah Jong	C D S	7.89	11.84
Combat School	Ocean	7.07	11.81
Computer Hits 4	Beau-Jolly	7.86	11.81
Conflicts	P S S	10.23	14.18
Countdown	Domark	6.28	
Crazy Cars	Ent. Inter	7.86	11.81
Cybernoid	Hewson	8.49	12.74
Dark Sceptre	Firebird	7.07	11.81
Dark Side	Incentive	7.86	11.81
De Luxe Scrabble	Leisure Genius		12.60
Death Wish 3	Gremlin	8.49	12.74
Deflektor	Gremlin	8.49	12.74
Desolator	U S Gold	8.49	12.74
Dragon's Lair (1 + 2)	Soft Projects	7.07	
Draughts	C P Software	4.70	7.86
Dream Warrior	U S Gold	8.49	12.74
Driller	Incentive	11.81	14.18
Eddie Edwards Skiing	Elite	7.89	11.84
Elite	Firebird	7.86	10.23
Elite Collection	Elite	11.81	15.76
Empire Strikes Back	Domark	7.86	11.81
Enduro Racer	Activision	7.89	11.84
Epyx on Amstrad	U S Gold	8.49	16.99
Evening Star	Hewson	7.61	12.71
Every Second Counts	Domark	6.28	10.23
F15 Strike Eagle	Microprose	7.86	11.81
Five Star Games 3	Beau-Jolly	7.86	11.81
Flintstones	Grand Slam	7.07	11.81
Flying Shark	Firebird	7.07	11.81
Football Director	D&H Games	7.07	
Football Manager 2	Prism	7.89	11.84
Footballer of Year	Gremlin	8.46	12.71
Four Smash Hits	Hewsom	7.89	11.84
Freddy Hardest	Ocean	7.07	11.81
G Gooch Test Cricket	Audiogenic	7.86	11.81
Game Set & Match	Ocean	10.23	14.18
Games Winter Edition	U S Gold	8.49	12.74
Gary Linekers Football	Gremlin	8.49	12.74
Gauntlet	U S Gold	8.49	12.74
Gauntlet I + II	U S Gold	8.49	
Gee Bee Air Rally	Activision	7.89	11.84
Get Dexter II	Infogrames	7.86	11.81
Gothik	Firebird	7.07	11.81
Grand Prix 500cc	Loriciels	7.89	11.84
Great Gianna Sisters	U S Gold	8.49	12.74
Gryzor	ocean	7.07	11.81
Guild of Thieves	Rainbird		15.76
Gunship	Microprose	11.84	15.79
Gunsmoke	U S Gold	8.49	12.74
Hercules	Gremlin	8.49	12.74
Hopping Mad	Elite	7.89	11.84
Hunt For Red October	Grand Slam	11.81	15.76
Ikari Warriors	Elite	7.89	11.84
Impact	Audiogenic	7.86	11.81
Impossible Mission 2	U S Gold	8.49	12.74
Indiana Jones	U S Gold	8.46	12.74
Jewels of Darkness	Rainbird	11.81	15.76
Karate Ace	Gremlin	11.04	12.74
Karnov	Activision	7.89	11.84
Knight Orc	Rainbird	11.80	15.76
Konami Arcade Coll	Imagine	7.86	14.18
Konami Coin-Ops	Imagine	7.86	11.81
Krypton Factor	Domark	6.28	11.81
Leaderboard	U S Gold	8.46	12.71
Leaderboard add on	U S Gold	4.24	8.49
Live Ammo	Ocean	7.86	11.81
Lurking Horror	Infocom		19.74
Mach 3	Loriciels	7.89	11.84
Magnificent 7	Ocean	7.86	14.18
Marauder	Hewson	8.49	12.74
Mask	Gremlin		12.74
Mask II	Gremlin		12.74
Matchday II	Ocean	7.07	11.81
Mercenary 1	Novagen	7.86	11.81
Mercenary Comp	Novagen		15.76
Mercenary Re-launch	Novagen		11.81
Mickey Mouse	Gremlin	8.49	12.74
Mindfighter	Activision	11.84	15.79
Monopoly	Leisure Genius	7.86	11.81
Out Run	U S Gold	8.49	12.74
Overlander	Elite	7.89	11.84
Paperboy	Elite	7.07	11.81
Pawn	Rainbird		15.76
Peasant Tale	Pirate		11.81
Pegasus Bridge	P S S	10.26	14.21
Peter Beardsley	Grand Slam	7.07	
Pink Panther	Gremlin	8.49	12.74
Pirates	Microprose		15.76
Platoon	Oceam	7.86	11.81
Predator	Activision	7.89	11.84
Rampage	Activision	7.89	11.84
Renegade	Imagine	7.07	11.81
Revenge Of Doh	Imagine	7.07	11.81
Roadblasters	U S Gold	8.49	12.74
Rolling Thunder	U S Gold	8.49	12.74
Salamander	Ocean	7.07	11.81
Scalextric	Leisure Genius	7.86	11.81
Scrabble	Leisure Genius	7.86	11.81
Scruples	Leisure Genius	7.86	11.81
Shackled	U S Gold	8.49	10.19
Silent Service	Microprose	7.86	11.81
Silicon Dreams	Rainbird	11.81	15.76
Skate Crazy	Gremlin	8.49	12.74
Solid Gold	U S Gold	8.49	16.99
Sorcerer Lord	P S S	10.23	14.18
Spitfire 40	Mirrorsoft	7.86	11.81
Spy vs Spy Trilogy	Databyte	7.86	11.81
Star Wars	Domark	7.86	11.81
Starglider	Rainbird	11.81	15.76
Steve Davis Comp.	C D S		7.89
Street Basketball	U S Gold	8.49	12.74
Street Fighter	U S Gold	8.49	12.74
Strike Force Harrier	Mirrorsoft	7.86	11.81
Summertime Special	U S Gold	11.04	
Super Chess	C P Software	4.70	
Super Hang On	Activision	7.89	11.84
Target Renegade	Ocean	7.07	11.81
Ten Great Games	Gremlin	8.49	
Ten Great Games II	Gremlin	8.49	
Tetris	Mirrosoft	7.10	10.26
They Sold a Million	Ocean	7.86	11.81
They Sold a Million 2	Ocean	7.86	11.81
They Sold a Million 3	Ocean	7.86	11.81
Thrust/Ninja Master	Firebird		5.52
Thrust 2/Parabula	Firebird		5.52
Thundercats	Elite	7.86	11.81
Tobruk	P S S	7.86	11.81
Tomahawk	Digital Int	7.86	11.81
Top Ten Collection	Elite	7.89	11.84
Trivial Baby Boomer	Domark	11.81	15.76
Trivial Genus Edition	Domark	11.81	15.76
Trivial Young Edition	Domark	11.81	15.76
Twenty Chartbusters	Beau Jolly	7.89	
Vindicator	Imagine	7.07	11.81
Vulcan	C C S	7.86	
We Are The Champions	Ocean	7.86	14.18
Winter Games	U S Gold	8.46	12.71
Wizard Warz	U S Gold	8.49	12.74
Wolfman	C R L	7.86	
Wonderboy	Activision	7.89	11.84
World Class Ldr'board	U S Gold	8.49	12.74
World Games	U S Gold	8.49	12.74

CPC6128 utility software

Advanced Art Studio	Rainbird	19.71
Advanced Music System (+464)	Rainbird	23.66
AMX Stop Press	A.M.S	43.99
Stop Press + Mouse	A.M.S.	70.00
Dbase II	1st Software	78.96
Extra Extra (Stop Press)	A.M.S	19.74
Mastercalc 128	Campbell	26.07
Masterfile 2 (464)	Campbell	26.07
Masterfile 3	Campbell	31.56
OCP Art Studio	Rainbird	15.76

Arnor CPC Software

	cass	disc	rom
Protext	19.95	26.95	39.95
Prospell		24.95	34.95
Promerge		24.95	
Promerge Plus			34.95
Utopia			29.95
Maxam	19.95	26.95	39.95
Maxam 1.5			29.95
BCPL		24.95	29.95
Model Universe	15.95	19.95	
ROMBO Rom box			34.95
Protext Filer (needs Promerge)		24.95	
Protext Office (needs Promerge)		34.95	

Amster's Cage ROM Viewdata software 31.95

Maxam 1.5 ROM

At last, due to massive public demand, we have produced an enhanced Maxam ROM especially for Protext users. The editor has been taken out, and you can now assemble your source code simply by typing ASM while it is in Protext's memory. Debugging is now easier with comprehensive diagnostics and the ability to change register contents and resume from breakpoints. Other new features include load/save machine code from Protext/Maxam and extra assembler directives. All the other Maxam features are included. ROM: £29.95.

Arnor PCW/CPC 6128

Protext (v2.2)	59.95
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For details of our word processing and utility software send an s.a.e. or see last month's Amstrad Action.

All prices include VAT, post + packing. Please phone to enquire about products not listed. We can supply software for most computers at very low prices. Please make cheques payable to Arnor Ltd. or quote Access/Visa number. 24 hour sales line on 0733 239011. Arnor Ltd (AA11), Protext House, Wainman Road, Peterborough, PE2 0BU.

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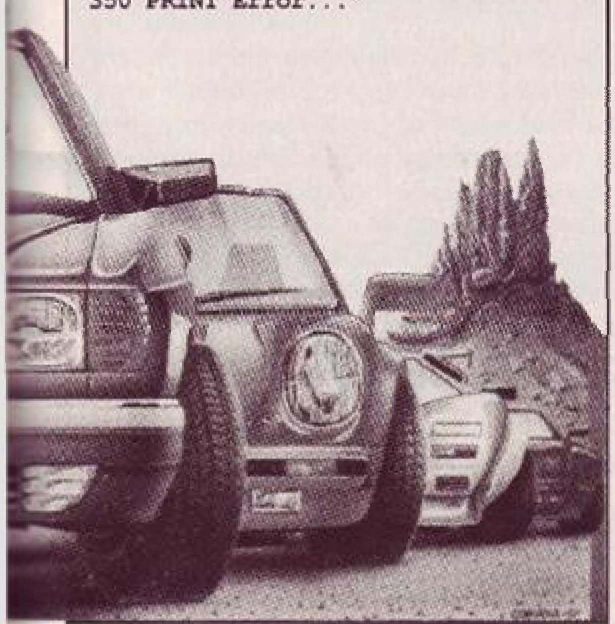
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CRAZY CARS™

Titus's car racing game has also been attacked by **Mike Wong** to give you infinite time and a choice of the number of stages in a level. Run it with the disk in the drive.

```
1 ' Crazy Cars-disk
2 ' By Mike Wong
3 ' Amstrad Action Nov 88
10 DATA 21,00,01,11
20 DATA 00,00,0e,41
30 DATA df,a6,be,af
40 DATA 32,83,01,21
50 DATA 98,be,22,89
60 DATA 01,c3,00,01
70 DATA 21,00,00,22
80 DATA a5,51,3e,09
90 DATA 32,9c,44,c3
100 DATA 00,40,3c,c0
110 DATA 07
120 FOR n=&BE80 TO &BEA8
130 READ a$:a=VAL("&"+a$)
140 POKE n,a:c=c+a:NEXT
150 IF c<>2985 THEN 350
160 INPUT"Inf time (y/n)";a$
170 IF a$="y" THEN 190
180 POKE &BE90,&9E
190 PRINT"No. of stages ";
200 INPUT"in a level (1-9)";a
210 IF a=0 THEN 230
220 POKE &BE9F,a
230 PRINT"Insert CRAZY ";
240 PRINT"CARS disc..."
250 CALL &BB18
260 POKE &BDEE,&C9
270 MODE 0:BORDER 0
280 FOR n=0 TO 15:INK n,0
290 NEXT
300 LOAD"crazy.bin",&C000
310 FOR n=0 TO 15
320 INK n,PEEK(65500+n)
330 NEXT
340 CALL &BB18:CALL &BE80
350 PRINT"Error..."
```



The black box

Most games are heavily protected these days, resulting in longer pokes.

Many of you have one of the infamous black boxes that can be used to stop programs – the **Multiface 2** from Romantic Robot for example.

Often the only thing that they're used for is transferring games from tape to disk, but they can also be used to hack games for infinite lives etc.

This new occasional section is for owners of the **Multiface 2** and similar devices so that they can poke games without typing in huge listings.

Here's how you enter them:

- Plug the **Multiface** into the expansion slot at the back of your keyboard. (**Multiface 2** owners: make sure that the switch on the front is in the up position.)
- Load the game that you want to poke in the usual manner following the instructions supplied with it. (**Multiface 2** owners: move the switch to the down position after it has loaded.)
- Press the red button on the **Multiface** and a menu appears at the bottom of the screen. Press 'T' for tool and then 'H' to change input to hexadecimal.
- Press the spacebar and type in the number under the Addr column. Next type in the number under the Poke column. Repeat this process until you've entered all of the pokes that are listed for the game and then press 'ESC'.
- Press 'R' to return to the game: it then runs with the pokes that you've just entered.

Game	Addr	Poke	Effect
Impact	6be1	00	Extra Life
	6be2	00	every 10,000
	6be3	00	points.
Impact	6f94	00	Infinite
	6f95	c3	lives.
Batman	7428	00	Inf. Lives
Cauldron II	1c90	00	Inf. Lives
Dun Darach	792a	18	Open all doors
Green Beret	13c9	b7	Inf. Flame Thrower
Spindizzy	a85e	c9	Infinite Time
720°	9528	00	Inf. Credits
	80b8	00	Inf. Tickets
Rygar	2c38	a7	Inf. Lives

Shorten the odds

- **We receive dozens of pokes, and the ones published tend to be on cassette or disk, unless they're very short (get the hint?).**
- **Include an SAE if you want your disk or tape returned.**
- **Make sure your name and address is on everything you send us!**

Win an ENTIRE ISSUE'S RAVES!

To win an entire issue's *Rave* software – and that includes the *Mastergame* – all you have to do is produce an excellent map, poke or set of playing tips.

The best solution each month wins a copy of every *Rave* and the *Mastergame* of that issue. The number of games varies of course, but in a good issue it can be half a dozen. We also give runner-up prizes every month of a *Rave* or the *Mastergame*.

This month's prize of £5,000,000 goes to Gary Barrett. Ok, the real winner of the *Mastergame* and all the *Raves* this month is Mike Wong for his assortment of pokes. The runners up who each receive a *Rave* or the *Mastergame* are Julian Page and Neil MacDougall. Congratulations all, and keep them coming – we appreciate your efforts! (And to all those who send in pokes and maps: if at first you don't succeed, try, try again!)

ONLINE

Making a triumphant return...

CYMRUTEL

0492 49194 ● 1200/75 Viewdata 7 data, even parity one stop bit ● Sysop: Ian Woodroffe

It's pronounced 'Com-ritel', and it's been in operation for around about a year. Old hat? Well, it seems that a number of improvements have taken place...

Cymrutel is based in North Wales. Once upon a time, it was a perfectly ordinary bulletin board, with few pretensions at all. Nowadays it has a vibrant, glitzy feel. It's going places.

Getting there

Access is through one measly port. That means that guests having a look round can queue for quite a long time – never mind. Once online, you have to declare just who you are. Pseudonyms ('handles') are allowed, although bear in mind that it makes sense to stick to one particular name.

If you like what you see you should register. This is quite a simple matter. You fill out an application form while on the service. A copy is sent to you. After confirming the information you return it, together with a cheque for £12. That pays for a year's subscription.

This is a Good Idea, because all bar one port are reserved for subscribers. You also have fairly well unlimited online time, as opposed to being given the PFOD – or Polite Finger Of Disconnection. (Be warned, however: British Telecom present you with a heck of a bill if you stay on too long.) There's also plenty of CUG's (closed user groups, or clubs), and you must be registered to access these.

Becoming an information provider (someone who actually designs the pages) is also possible, and fairly cheap. Paying £25 gets you the title of editor, and it costs £5 for every twenty five pages you can play with. That's for a year.

Facilities

What you can access with the system is nothing outrageous, but nonetheless interesting. To start off with, the viewdata graphics have been used quite well, and the pages generally look well produced. More graphics would have been nice.

Page zero – generally the main menu on viewdata systems – contains a fair range of options, even for guests. There are various SIG's (special interest groups – clubs devoted to one subject), including quite a good one for the CPC. This seems to have a reasonable number of contributors as is, and the numbers should increase even more.

A promise and a threat

The promise: pretty soon Cymrutel will be downloading satellite pictures from MeteorSat. Apparently they already have the equipment, they're just working out how to connect it... This system should be up and running within a few months.

And the threat: the board makes the statement loud and clear; any material contributed which breaks the law or is related to criminal activity will result in the registration being terminated. People requesting such information are tactfully reminded of the rules. Nice one Cymrutel.

Up the revolution

Many people tried leaving a mailbox message at the number in the screen shots of Micronet. That was the actually the Micronet page number. If you're still keen on leaving messages on the service (remember it costs money) then our number is 011112623.

It would make a change to get some E-mail as opposed to leaving it on the sundry bulletin boards I visit. I'm especially interested in new CPC related services – but if you think something else is worth a telephone call, use the above facility by all means.

There is some telesoftware on the board. At present there doesn't appear to be any for the CPC's. Still, if they get some contributions Cymrutel might change their policy.

Electronic mail is what keeps the service going. I must admit that going through the previous entries for the past year was quite absorbing, although too many of them were of the 'just testing this out' type – when I read mail, I can do without the junk variety.

One area generally left out of boards or services is comms. I admit that people able to get onto boards generally know enough about the subject anyway, but such services can provide quite a few leads for people who want to learn more about the subject – and that probably includes most of us.

There is a fair old selection of viewdata service telephone numbers, and Cymrutel indicates whether they're 24 hours a day or not. Strangely, it lists itself!

More

One of the main options available is to learn more about *Cymrutel*. It was first brought online in October 1987, and had very few phone lines. The system has gradually improved (always with the subscriber in mind), and logging on is now quick and easy – they even had the BT engineers in after complaints about line noise.

The location of Cymrutel is significant – the computer, modems etc. are set up in Llandrillo College, Colwyn Bay. A lot of the contributions appear to be from sixth formers (don't let that put you off). Also, the 'hacker as twentieth century wizard' idea (yawn) seems to be prevalent in the various names of the contributors – Gandalf, Paz, Probus, Raistlin and so on. Even Groberts has overtones of the fantastic, until you find that the co-sysop's name is Gareth Roberts.

The system makes some interesting comparison with *Gnome at Home*. They both deal with similar subjects (including roleplaying and adventure games) but, whereas *Gnome* appears to contain more material and variety, *Cymrutel* is better presented, with more logical gateways between points. Try comparing them. Some *serious* people find this usage of holy processing equipment blasphemous. I can't say I'm one of them, but you have been warned...

Next month: Microlink – a board that can show you satellite pictures – for a price!

PILGRIM

Ingrid's Back *AND* Lancelot *in one issue... yessir, Pilg-Person!*

Hail to thee, blithe Pilgrims! In this month's rather cramped edition we have room for red-hot reviews of *Ingrid's Back* and *Lancelot*, plus some great tips for those in distress, and news from adventurers far and wide. Drool, Pilgs, but wipe your chins afterwards!

INGRID'S BACK

Level 9 ● All CPC's ● £9.95 cass, £14.95 disk

This very pleasing game design marks a substantial improvement on Level 9's previous two titles. Aged Pilgs will remember the distinct disappointment of seeing *Knight Orc*, the first game produced using Level 9's updated adventure system. *Gnome Ranger*, which followed it, was a marginal improvement, but somehow the game still didn't cut the crumpet – though The Pilg should hasten speedily to add that it was still a very impressive release by most adventure standards.

If you really want to understand the good points of *Ingrid's Back* – and it *is* a good game – you need to know a little about why the previous two games failed and what Level 9 were (and still are) trying to do.

The main feature of their new adventure system is the ability to program characters with whom you can interact. As Pete Austin pointed out to the Pilg some years back now (and I've quoted him endlessly), the number of satisfying and original puzzles you can build nowadays around objects is really very small. The trouble is we've been playing object-oriented games since *Colossal Adventure*. If you think back to any early adventure, I bet you'll find that the most memorable puzzles (if there were any) were to do with objects and their various uses.

For example I always remember the rod which you had to wave in *Colossal*, the rock you had to press in...er...one of those Interceptor adventures, and so on. Of course there *were* characters in those days, but they were mostly evident in *The Hobbit*. This game's major contribution to adventuring was the character-based puzzle, one of the first examples of which was Thorin carrying you out of the Goblin's Dungeon. Characters have enormous potential as puzzles, together with the added advantage that they can, if well programmed, greatly enhance atmosphere. Object puzzles, on the other hand, are usually rather static – and most of them have been used already.



● *Ingrid's Back* with a vengeance!

Level 9 therefore set out to develop a character-based system that would bring games to life. In *Knight Orc*, there were dozens of NPCs (non-player characters controlled by the computer) – as a result of which confusion reigned and the game suffered. Furthermore, the characters were rather boring. After all, there's more to an interesting character than simply being able to give it commands, as you'll see in *Ingrid's Back*.



Gnome Ranger went a little further, but the characters, although very colourful in a couple of instances, remained rather unimpressive. In *Ingrid's Back*, however, the people you meet and spy upon really do add a lot to the game. Characters, it seems, are growing up. Here's what they get up to...

The story concerns Ingrid's return to her home village of Little Moaning, where all the gnomesy-womesies are going about their business completely unaware that the local squire, Jasper Quickbuck, is planning to have them all evicted. The game falls into three parts, each one a separate module that can be played independently of the others.

In the first part, Ingrid has to collect signatures from her fellow gnomes for a petition against the eviction. This is pretty simple, since you can locate most of them by using the game's high-level 'find' command. The main objective of this first part is to get you used to the system, the commands – which include GO TO and RAMsave – and the characters.

In the second part the eviction order is in full swing and the baddies are on the march. Ingrid has to defend Gnettlefield Farm against invading trolls and other representatives of the capitalist tendency.

In the third part, Ingrid enlists as a maid in Jasper Quickbuck's mansion in an attempt to dig up some dirt on the old dirtbag and bring him his just desserts.

Throughout the game, the personalities you meet are full of character, and what's more they carry out many different actions which, when observed, add a great deal to the plot. In fact, in Part III, there's even a character whom you can spy upon through a hole in a wall, watching him go about his (mysterious) business. All this adds enormously to the enjoyment of playing.

In addition, the graphics for the game are a vast improvement on earlier Level 9 efforts. This improvement is, frankly, long overdue. The first Level 9 graphics, back in the days of Emerald Isle and Red Moon, were pretty ghastly and since then the company never seem to have got to Grips with matters visual. All that's changed now, and the pictures are fabulous. They're not as technically well drawn as the Magnetic Scrolls pictures but I'd venture to say that they have more warmth and character.

Playing the game is a pleasure, with each module having a different feel to it. There's novelty in the first, challenge in the second, and detective work in the third. What more could you want?

Atmosphere	83%	Interaction	83%
Challenge	81%	Overall	82%

LANCELOT

Level 9 ● All CPC's ● £9.95 cass, £14.95 disk



Level 9 have now turned their backs on Mandarin. It seems to have been a rather brief affair, and *Lancelot* is likely to be the only Level 9 product coming out under this label. Does it deserve this unique status? Certainly the scenario is a potent one. Those not familiar with the Arthurian legends can rest assured that there is adequate documentation with the game, but in brief the saga concerns Arthur's reign over Britain, aided by his Knights of The Round Table.

Thence comes Lancelot, a squire, who defeats Arthur in combat but spares his life and is knighted by the king in recognition of this deed. Guenever (that's how they spell it), Arthur's wife, takes a fancy to the new knight and Lancelot finds himself bound to her service, both through his own inclinations and her desires.

Level 9's game tries to pack an awful lot into what is essentially a three-part adventure. The first two parts are effectively one, since you can move between them with ease. However, you can also choose, at the beginning of the game, to move straight onto the final chapter – the Search for The Holy Grail.

You start the game outside Camelot and must first fight with Arthur before entering the castle stronghold, where you are knighted and then sent out to win yourself a reputation by rescuing an assortment of captured knights. The puzzles at this stage are extremely simple and this phase, in common with the last three Level 9 3-parters, simply provides an opportunity to get used to the system.

Unfortunately, it also provides an opportunity to discover some very strange programming quirks in the game, which abound throughout all three parts. For example, you cannot remove your armour at will, but find yourself taking it off quite happily before climbing a tree; you can clean your armour, but you can't clean yourself – even though you are dirty, and so on.

There are many trivial illogicalities like these which do not actually affect the gameplay but do seriously mitigate the atmosphere of what could otherwise be a superlative game. The characters also suffer from sloppy programming, from time to time making quite inappropriate remarks, often relating to some action or situation no longer relevant.

What is far more serious is the actual structure of the game. There's a huge amount of material condensed into this adventure and the space available just isn't enough to do it justice. As a result, great quests which could have made an adventure in themselves are dismissed in a single puzzle, leaving the player feeling, if not cheated, then at least let down.

For example, at one stage you are told to rush off and help raise the siege of Lyonesse. You arrive on the scene, solve one simple puzzle that takes about five minutes, and the whole army surrenders! In another case, you defeat an entire army without solving any puzzles at all! Truly, this Lancelot is, as Chaucer put it, a parfitte knyghte'!


● *Lancelot* hits ye streets!

Against these weaknesses you have to place some superb scene-setting in Camelot and elsewhere, and one or two very satisfying puzzles. Furthermore, the character programming, although at times sloppy, shares some of the strengths of *Ingrid's Back* in that you can follow and observe characters getting on with their daily lives – a process that adds greatly to the atmosphere of the game.

The graphics are at times very attractive, but they don't quite match *Ingrid's Back* for quality and, in one or two places, are very poor. Like the game structure itself, the presentation is a curate's egg of powerful, convincing moments, and depressingly low standards. The blurb quotes Pete Austin as saying this is their best game yet, but the Pilg finds it hard to agree. When it hits the high notes, it certainly matches anything the company have done so far, but the low notes seem even more depressing as a result.

What this game shows is that there is a tremendous potential still to be explored in setting text adventures round potent story scenarios such as this one. It also shows that you need either to be very selective in what you try to squeeze into a game, or else you need an awful lot of programming time, disk space, and patient play-testing.

Atmosphere	**88%**	**Interaction**	**78%**
Challenge	**81%**	**Overall**	**80%**



The Lords and Ladies of Adventure

Once again the undying ones come to the help of those less fortunate than themselves. Apply to join the Lords and Ladies by writing to:
***Pilgrim (Lords and Ladies), AA*, 4 Queen Street, Bath, BA1 1EJ.**

Forest at Worlds End, Gremlins, Heroes of Karn, Midnshadow, Message from Andromeda, Never Ending Story, Red Hawk, Spy Trek, Seabase Delta, SubSunk, Warlord, Spellbound, Knight Tyme, Storm Bringer.
Robert Weir, 87 Burnside Rd, Gorebridge, Midlothian, EH23 4ET

Beerhunter, Heroes of Karn, Never Ending Story, plus limited help on Redhawk and Rigels Revenge.
Andrew MacDonald, Brookhouse Farm, Eccleshall, Staffs, ST21 6NE

Kentilla, The Big Sleaze, Hobbit, Forest at the Worlds End
David Liddell, 91 Orbiston Drive, Bellshill, ML4 2LX

Never Ending Story, The Hobbit, The Boggit, Warlord, Enchanter, Forest at Worlds End, Marsport, Spellbound, Knight Tyme, Souls of Darkon, Return to Eden, Emerald Isle, Jewels of Babylon, Fantasia Diamond, Seabase Delta, Adventureland, Return to Eden.
Tim Gurney, Lords Hill, Shamley Green, Guildford, Surrey, GU5 0TJ

Hobbit, Lord of the Rings, Knight Orc Part 1, Pawn, Guild of Thieves, Jinxter.
Thomas Sinclair, 265 Calder Street, Govanhill, Glasgow G42 7QG

Forest at Worlds End, Gremlins, Message from Andromeda, Bored of the the Rings, Jewels of Babylon, Warlord, Heroes of Karn, Never Ending Story, Fantasia Diamond, Robin of Sherwood, Adventure Quest, Dungeon Adventure, Terrormolinos, Emerald Isle.
Alistair McBain, 52 Fox Covert Avenue, Corstorphine, Edinburgh

The Pilgrim's postbag

Oh, bugged: *The Hobbit!*

I write to you not in a wild plea of anguish, but to question the parser in *The Hobbit*. I have in my possession the rope...

>EXAMINE ROPE
You see the rope
>TIE ROPE
I see nothing to tie the rope to.
>TIE ROPE TO ELROND
The rope is already tied.

Now what *is* going on?!

Mike Wheeler
Surrey

Welcome to the 'I've discovered a Hobbit *bug' club...*

Son of *Rigel's Revenge – part II*

Sorry to have to complain but the *Rigels Revenge* solution doesn't work too well when you give the bone to the wee dog. I tend to get savaged by Mutant Poodles. How do you get past the Fidos and what is the gap you are talking about?

I've played one or two games of the adventure sort and the question I have to ask is why a full list of accepted words isn't printed either in the game or on the packaging. Trying to second guess the parser is a real pain in the neck when you have solved the main problem.

Timothy Bell
County Durham

Well Timothy, the Rigel's Revenge *clues weren't exactly intended to be a solution! There's much more to the game than that. The clues were simply to point you in the right direction. However, as far as the Mutant Poodles are concerned, try giving the bone to the dog, then going up, up, w, and then south. The tank should cure the poodle problem. Then SW, up, S, press green button, and jump the gap...*

Applause for *Bard's Tale*

Although I have eagerly read your part of *AA* since the beginning, the only adventure I have previously bought is *The Worm in Paradise* by Level 9. However my colour monitor appears to be on its last legs (as does the rest of my 464) and, since games like *Matchday II* and *Target Renegade* are now loading without all except one of the background colours, my interest in these types of game is starting to fade.

I was browsing through the games in the local WH Smith when my eye was caught by a cassette copy of *Bards Tale*. It did not take me very long to decide to buy it when I remembered the contrasting colours in the game and the opinion of it you gave in AA35.

After a few minutes of playing I realised my money had not been wasted, unlike so many games I buy I had found one which I could play not only for one week but one with lasting interest which I could load in again and again.

The thrill of playing an RPG – previously destroyed after attempting to play *D & D* and *Dragon Warriors* with my younger brother and sister – came back to me.

To me, this is what a computer game should be about. I would just like to recommend the *Bard's Tale* to any *AA* reader whether an adventure fan or not as everyone will enjoy it.

Thomas Page
Address unknown

I've just bought that amazing game *Bard's Tale* and I can tell you it's one of the best adventures that I've ever played. I think Electronic Arts deserve a pat on the back for it. Having followed your column since *AA1*, I've seen what a great job you've done in helping people solve games and also in bringing news of the latest games for the Amstrad – so now it's my turn to ask. I would be grateful if you could find out when *Bard's Tale 2* is going to be released for the Amstrad.

Tim Gurney
Guildford

Tim, the bad news at the moment is that there are currently no plans to convert BT2 *for the CPC's. The good news, however, is that EA were apparently 'delighted' with the sales they achieved with* BT *and are therefore considering future conversions. Keep your fingers crossed and watch this space...*

The Pilgrim's clue pot

This month's delicious aroma of serious situations resolved in a deliciously scented stock of sensible solutions is brought to you courtesy of the following almighty Honorary Pilgs: Timothy Bell, Jamie Tillman, and Brian MacGregor

Kentilla

To fly over to Tylon's castle make Timandra and Zelda meet and then go to the front of Tylons castle. Timandra and Zelda will eventually come, so CLIMB ZELDA and you will be transported to the castle. To open smooth doors pull arm of the gargoyle statue.

To open chest, dip gold key into the barrel to turn it to iron and now open chest. At the waterfall edge tie rope to stalactite.

Examine green emerald in the dark, you will find some words, say these words and... The boat has a giant hole in it so try baling the water with the chalice. Drop moss in plains then look.

Never Ending Story

Drop coin by Wraith. Say please to open doors leading to the Empress's quarters. Wait till the Sphinx's blink and run south.

Seabase Delta

To wake hen. Go into the room with the basket, open basket, examine basket, a hen will walk out. Now get the chewing gum, go back to hen, chew gum, blow bubble (this will eventually pop) and then the hen will wake up and lay an egg.

The Bards Tale

When mapping, the first map of any sequence enters at the southwest corner, subsequent levels are stacked. Get rid of the thief and get a monk instead. On later levels he will do more damage than any other. Also, he is very useful for carrying things as he is most dangerous unarmed. *Are a enchant* (mage Spell) is hopeless and doesn't work – don't waste energy on it.

Later levels have loads of blackouts so carry a torch or two. *Howater* will let you down when you need it most. Magic Items (eg Lorchelm, Harp of Healing, Soulsword etc) all have a limited number of charges and when 'used' by a character often summon powerful characters to join the party. Pet favourites are Greater Demons and the Old Man, both of which can wipe out whole groups at a time. Wipe out Dragons and Demons first – it is very easy for them to wipe out an entire party very easily. When smoke gets in your eyes strike another light. Always look for traps and use a magic compass.

TYPE-INS

Programs packing more punch than Mike Tyson

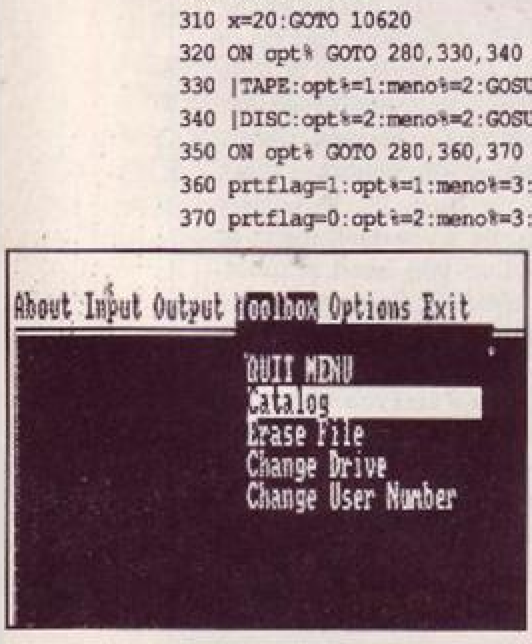
Pull down menus

And now – a pull down menu system for the 6128! With a few alterations (notably the use of COPYCHR$: an RSX was printed in *AA22*) it works on the 464 as well.

Lines 10-630 are simply a demo program, whereas 10000 onwards is the actual menu system.

Marcus Williams of Birmingham wrote this program – big, but very useful (the program, that is, not – as far as we know – the author!).

```
10 REM Pull Down Menu System
20 REM Marcus Williams
30 REM Amstrad Action November 1988
40 |DISC
50 GOSUB 10010
60 WINDOW#1,2,79,3,23
70 CLS#1:x=1:y=2:d=21:w=78:GOSUB 11430
80 GOSUB 11550
90 no%=6:GOSUB 10160
100 DATA 1,2,"Exit Menu System and list","Version"
110 DATA 2,2,"Tape","Disc"
120 DATA 3,2,"Screen & Printer","Screen"
130 DATA 4,4,"Catalog","Erase File","Change Drive","Change
   User Number"
140 DATA 5,2,"Clear Screen","NotePad"
150 DATA 6,3,"Exit to CP/M","Exit to BASIC","Reset AMSTRAD"
160 INK 0,0:INK 1,26:BORDER 15
170 t$="About Input Output Toolbox Options Exit":GOSUB 11340
180 iy=25:GOSUB 10810
190 CLEAR INPUT
200 meno%=2:opt%=2:GOSUB 10700
210 meno%=3:opt%=2:GOSUB 10700
220 a=320:b=200:meno%=0
230 GOSUB 11550
240 GOSUB 11120
250 IF meno%=0 THEN 240
260 ON meno% GOSUB 290,320,350,380,550,580
270 meno%=0:GOTO 240
280 RETURN
290 ON opt% GOTO 280,300,310
300 MODE 2:LIST
310 x=20:GOTO 10620
320 ON opt% GOTO 280,330,340
330 |TAPE:opt%=1:meno%=2:GOSUB 10700:RETURN
340 |DISC:opt%=2:meno%=2:GOSUB 10700:RETURN
350 ON opt% GOTO 280,360,370
360 prtflag=1:opt%=1:meno%=3:GOSUB 10700:RETURN
370 prtflag=0:opt%=2:meno%=3:GOSUB 10700:RETURN
```




```
380 ON opt% GOTO 280,390,420,500,460
390 CLS#1:WINDOW SWAP 1,0:CAT
400 IF prtflag=1 THEN
x=1:y=1:d=20:w=77:GOSUB 11660
410 WINDOW SWAP 0,1:RETURN
420 CLS#1:WINDOW SWAP 1,0:CAT
430 CLEAR INPUT:INPUT "Filename :",f$
440 |ERA,@f$
450 WINDOW SWAP 0,1:RETURN
460 WINDOW SWAP 1,0
470 CLEAR INPUT:INPUT "User
:",us%
```

Calling all 464 owners!

If you don't have *AA22* to hand, here's a quick summary.

The first thing to do is to insert these lines:

```
10015 RESTORE 10017:FOR t=&BF00 TO &BF06:READ
      a$:POKE t,VAL("&"+a$):NEXT
10017 DATA cd,60,bb,32,07,bf,c9
```

Next, alter lines 10880 and 11700 as follows:

```
10880 LOCATE x,y:CALL &BF00:un$=STR$(PEEK(&BF07))
      :PRINT CHR$(211)
11700 LOCATE q,t:CALL &BF00:a$=a$+STR$(&BF07)
```

Now it's your turn. Lines 11110-11250 contain some commands with extra parameters. In general the third parameter is the temporary graphic ink colour, and the fourth is the printing mode.

A similar effect can be obtained with `PRINT CHR$(23); CHR$(x), where x ranges from 0 to 3 - 0=NORMAL, 1=XOR, 2=AND, 3=OR`.

Good luck!

```
480 IF us%>=0 AND us%<16 THEN |USER,us% ELSE PRINT "Invalid
   User."
490 WINDOW SWAP 0,1:GOSUB 10810:RETURN
500 WINDOW SWAP 1,0
510 CLEAR INPUT:PRINT "Drive (A,B) ?"
520 dr$=INKEY$:IF dr$="" THEN 520
530 IF UPPER$(dr$)<>"A" AND UPPER$(dr$)<>"B" THEN PRINT
   "Invalid Drive." ELSE |DRIVE,@dr$
540 WINDOW SWAP 0,1:GOSUB 10810:RETURN
550 ON opt% GOTO 280,560,570
560 CLS#1:RETURN
570 GOSUB 10830:RETURN
580 ON opt% GOTO 280,590,600,610
590 |CPM
600 CLEAR INPUT:MODE 2:END
610 CALL 0
620 CLEAR INPUT:MODE 2:END
630 RETURN
10000 REM * * * Set up Graphics * * *
10010 CALL &BC02:MODE 2:IF PEEK(&A1FE)=&E5 THEN 10030
10020 SYMBOL AFTER 140:MEMORY &5FFF:POKE &A1FE,&E5
10030 POKE &A1FF,0
10040 SYMBOL 255,3,3,6,6,76,108,56,24
10050 SYMBOL 150,255,128,191,160,160,160,160,160
10060 SYMBOL 155,0,0,0,0,0,255,0,255
10070 SYMBOL 156,255,1,253,5,5,5,5,5
```

```
10080 SYMBOL 154,255,0,255
10090 SYMBOL 147,160,160,160,160,160,191,128,255
10100 SYMBOL 151,5,5,5,5,5,5,5,5
10110 SYMBOL 153,5,5,5,5,5,253,1,255
10120 SYMBOL 149,160,160,160,160,160,160,160,160
10130 SYMBOL 254,255,0,255,0,255,0,255,0
10140 RETURN
10150 REM * * * Set up MENUS & the MACHINE CODE * * *
10160 GOSUB 11760
10170 DIM num(25),wid(25),menu$(25,25),omeno%(25),oopt%(25),
  men(25)
10180 DIM nt$(10),top$(40),topx%(40),topxx%(40)
10190 FOR t=1 TO no%
10200 menu$(0,0)=SPACE$(10)
10210 omeno%(t)=0:oopt%(t)=0
10220 j%=0:g%=0:READ meno%,num(meno%)
10225 men(t)=meno%
10230 FOR x=1 TO num(meno%)
10240 READ menu$(meno%,x)
10250 g%=LEN(menu$(meno%,x)):IF g%>9 AND g%>j% THEN j%=g%
10260 menu$(meno%,x)=menu$(meno%,x)+" "
10270 NEXT:menu$(meno%,0)="QUIT MENU "
10280 IF j%>9 THEN wid(meno%)=j%+1 ELSE wid(meno%)=10
10290 NEXT
10300 FOR t=1 TO 10:nt$(t)=SPACE$(59):NEXT
10310 RETURN
10320 REM * * * Pull down menu * * *
10330 CALL &A000:LOCATE x1,1:PRINT top$(meno%)
10340 y=2:d=num(meno%)+1:w=wid(meno%)+1:GOSUB 11430
10350 m$=menu$(meno%,0)
10360 LOCATE x+1,3:PRINT m$
10370 FOR y=1 TO num(meno%)
10380 m$=menu$(meno%,y)
10390 LOCATE x+1,y+3:PRINT m$
10400 NEXT
10410 REM * * * Move bar up and down * * *
10420 fl=-2:y=2:oy=y:WHILE fl=-2:fl=INKEY(47)+INKEY(76)
10430 oy=y
10440 GOSUB 10530
10450 IF INKEY(2)+INKEY(0)+INKEY(73)+INKEY(72)=-4 THEN 10510
10460 y=y+INKEY(2):y=y-INKEY(0)
10470 y=y+INKEY(73):y=y-INKEY(72)
10480 IF y<2 THEN y=2
10490 IF y>num(meno%)+2 THEN y=num(meno%)+2
10500 IF y=oy THEN 10510 ELSE GOSUB 10570
10510 WEND
```

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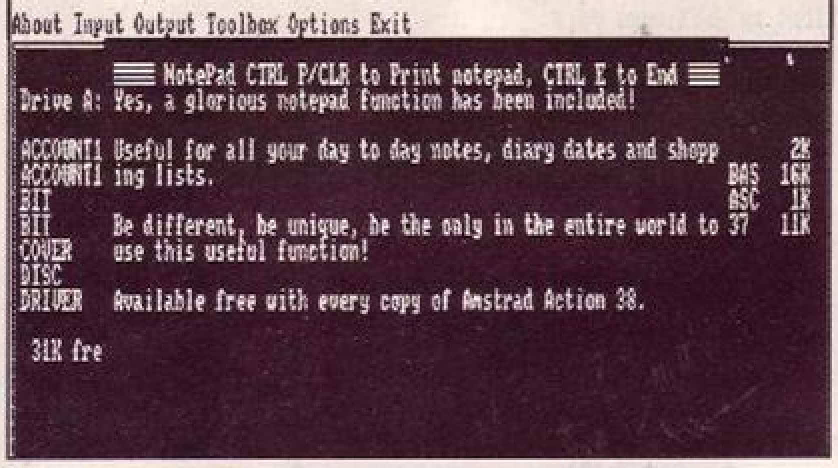
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- REM statements make the program easier to understand;
- Don't use letters that look like numbers as variable names (O and 0, for instance, or l and 1);
- Avoid lengthy multi-statements. Short lines aid debugging;
- And ensure your name and address are on *every* piece of paper, cassette and disk you send.
- If you'd like to reach an even larger audience, declare that you are putting your contribution into the Public Domain.

Oh, and one final thing. Good luck!

Program Notes

Line **10010** sets up the machine code routines as well as the user defined graphics and similar bits and pieces. It needs to be called at the beginning of the program – as should line **10160**, which creates the menus. Needs the number of menus in **no%**, and the data statements for the menus, as lines **100-150**. Line **10330** pulls down menu **meno%** at x coord in **x1**. The screen is retained during this operation. Line **10420** moves the bar up and down the menu, and is controlled both by the cursor keys and space, as well as the joystick. Option selected is returned in **opt%**. NB **QUIT MENU** option = option one.

Line **10620** displays a version box at coord in **x** (y position is fixed). This can be altered as desired. Line **10700** needs to be supplied with the options that are defaulted to (ticked) when the program first runs, and when a new option is selected. Line **10810** displays the **copyright** and **Drive no.** messages at Y coord. This routine needs the address changing to work on a 464. Line **10830** is the notepad routine. Again a few alterations are needed for Amstrad 464's.




```
10520 meno%=men(meno%):opt%=y-1:CALL &A07D:RETURN
10530 LOCATE x+1,y+1
10540 m$=menu$(meno%,y-2)
10550 PRINT CHR$(24)+m$+STRING$(wid(meno%)-LEN(m$)+1,
  CHR$(32))+CHR$(24)
10560 RETURN
10570 LOCATE x+1,oy+1
10580 m$=menu$(meno%,oy-2)
10590 PRINT m$+STRING$(wid(meno%)-LEN(m$)+1,CHR$(32))
10600 oy=y:RETURN
10610 REM * * * Version 1.2 * * *
10620 CLEAR INPUT:CALL &A000
10630 ver$=CHR$(24)+"Version 1.2 - "+CHR$(164)+" 1988
  Marcus Williams"+CHR$(24)
10640 y=10:d=2:w=LEN(ver$):PAP=1:GOSUB 11430
10650 LOCATE x+1,11:PRINT ver$
10660 LOCATE x+1,12:PRINT CHR$(24)+SPACE$(11)+"Press Any Key
  "+CHR$(24)
10670 WHILE INKEY$="":WEND:CALL &A07D
10680 RETURN
10690 REM * * * Ticks (Select on) * * *
10700 e$=menu$(omeno%(meno%),oopt%(meno%))
10710 menu$(omeno%(meno%),oopt%(meno%))=LEFT$(e$,LEN(e$)-2)
  +" "
10720 m$=menu$(meno%,opt%)
10730 l=wid(meno%)-LEN(m$):a$=""
10740 IF l>0 THEN a$=SPACE$(wid(meno%)-LEN(m$))
10750 a$=a$+CHR$(255)
10760 m$=m$+a$
10770 menu$(meno%,opt%)=m$
```

```
10780 omeno%(meno%)=meno%:oopt%(meno%)=opt%
10790 RETURN
10800 REM * * * Copyright,drive,user display line * * *
10810 LOCATE 1,iy:PRINT CHR$(24)+"Pull Down Menu System "+
   CHR$(164)+" 1988 M Williams        Drive is "+CHR$
   (PEEK(&A702)+65)+":  User Number is "+STR$(PEEK(&A701
   ))+CHR$(18)+CHR$(24):RETURN
10820 REM * * * Notepad * * *
10830 ti=1:t$="NotePad CTRL P/CLR to Print notepad, CTRL E
   to End"
10840 CLEAR INPUT:CALL &A000:x=10:y=2:d=11:w=59:GOSUB 11430
10850 FOR t=4 TO 13:LOCATE x+1,t:PRINT nt$(t-3):NEXT
10860 x=11:y=4
10870 a$=INKEY$:ox=x:oy=y
10880 LOCATE x,y:un$=COPYCHR$(#0):PRINT CHR$(211)
10890 IF a$="" THEN LOCATE x,y:PRINT un$:GOTO 10870
10900 e=ASC(a$):IF e=13 AND y<14 THEN x=10:y=y+1
10910 IF e=242 THEN x=x-2
10920 IF e=240 THEN y=y-1:x=x-1
10930 IF e=241 THEN y=y+1:x=x-1
10940 IF e=5 THEN CALL &A07D:RETURN
10950 IF e=16 THEN GOSUB 11060:x=x-1
10960 IF e=127 THEN del=1
10970 IF e>31 AND e<125 THEN LOCATE x,y:PRINT a$:MID$(nt$
   (y-3),x-10,1)=a$ ELSE LOCATE ox,oy:PRINT un$
10980 IF del=1 THEN x=x-2
10990 IF x<69 THEN x=x+1 ELSE x=11:y=y+1
11000 IF y>13 THEN y=13
11010 IF x<11 AND y>4 THEN x=69:y=y-1
11020 IF x<11 AND y=4 THEN x=11
11030 IF y<4 THEN y=4
11040 IF del=1 THEN LOCATE x,y:PRINT " ":MID$(nt$(y-3),x-10
   ,1)=" ":del=0
11050 GOTO 10870
11060 GOSUB 11090:IF prt=1 THEN FOR t=1 TO 10:PRINT #8,nt$
   (t):NEXT
11070 RETURN
11080 REM * * * Printer ON LINE test * * *
11090 IF INP(&7500) AND 64 THEN SOUND 1,142,10:prt=0 ELSE
   prt=1
11100 RETURN
11110 REM * * * Pointer Routine * * *
11120 oa=a:ob=b:TAG:MOVE a,b,1,1:PRINT CHR$(240);
11130 a=a+INKEY(1):a=a-INKEY(8)
11140 a=a+INKEY(75):a=a-INKEY(74)
11150 b=b+INKEY(0):b=b-INKEY(2)
11160 b=b+INKEY(72):b=b-INKEY(73)
11170 IF a>639 THEN a=639
11180 IF a<0 THEN a=0
11190 IF b<0 THEN b=0
11200 IF b>399 THEN b=399
11210 ch=INKEY(47)+INKEY(76)
11220 TAG:MOVE oa,ob,1,1:PRINT CHR$(240);
11230 IF ch=-2 THEN 11120
11240 TAGOFF
11250 IF b>382 THEN 11270 ELSE RETURN
11260 REM * * * Find which menu pulled and to pull it * * *
11270 t=1:WHILE t<=no%
11280 IF a>=topx(t) AND a<=topxx(t)-8 THEN meno%=t:GOTO
   11300 ELSE meno%=0
11290 t=t+1:WEND
11300 IF meno%=0 THEN RETURN
11310 x1=(topx(meno%)+8)/8
11315 IF x1+wid(meno%)>78 THEN x=78-wid(meno%) ELSE x=x1
11320 GOSUB 10330:RETURN
11330 REM * * * TOP options * * *
11340 m=1:FOR t=1 TO LEN(t$)
11350 IF MID$(t$,t,1)<>" " THEN top$(m)=top$(m)+MID$(t$,t,1)
   ELSE m=m+1
11360 NEXT
11370 FOR t=1 TO m
11380 topx(t)=topxx(t-1):topxx(t)=((LEN(top$(t))+1)*8)+
   topxx(t-1)
11390 NEXT
11400 LOCATE 1,1:PRINT CHR$(24)+t$+" "+CHR$(18)+CHR$(24)
11410 RETURN
11420 REM * * * Empty Box + title if needed * * *
11430 IF pap=1 THEN PEN #2,0:PAPER #2,1:PEN 0:PAPER 1
11435 WINDOW#2,x+1,x+w,y+1,y+d
11440 CLS#2:LOCATE x,y:PRINT CHR$(150)+STRING$(w,CHR$(154))
   +CHR$(156)
11450 FOR t=1 TO d
11460 LOCATE x,y+t:PRINT CHR$(149):LOCATE x+w+1,y+t:PRINT
   CHR$(151)
11470 NEXT
11480 LOCATE x,y+t:PRINT CHR$(147)+STRING$(w,CHR$(155))+
   CHR$(153)
11490 IF ti<>1 THEN 11525
11500 LOCATE x+1,y+1:am=(w-LEN(t$))/2
11510 e$=STRING$(am-1,CHR$(254))+" "+t$+" "
11515 e$=e$+STRING$(w-LEN(e$),CHR$(254))
11520 PRINT e$:ti=0
11525 IF pap=1 THEN PEN #2,1:PAPER #2,0:PEN 1:PAPER 0:pap=0
11530 RETURN
11540 REM * * * Please wait * * *
11550 IF flag=1 THEN CALL &A000
11560 LOCATE 32,11:IF PEEK(&A1FF)=&E5 THEN 11610
11570 w=11:d=1:x=32:y=11:GOSUB 11430
11580 LOCATE x+1,y+1:PRINT "Please wait"
11590 POKE &A1FF,&E5
11600 RETURN
11610 IF flag=1 THEN CALL &A07D:flag=0:RETURN
11620 FOR t=11 TO 14:LOCATE 32,t:PRINT SPACE$(w+2):NEXT
11630 POKE &A1FF,0
11640 RETURN
11650 REM * * * Print out window * * *
11660 GOSUB 11090
11670 IF prt=0 THEN RETURN
11680 FOR t=y TO y+d
11690 FOR q=x TO x+w
11700 LOCATE q,t:a$=a$+COPYCHR$(#0)
11710 NEXT
```

Patterns

A simple program that creates black and white kaleidoscope effects. A good bit of speed helps the effect.

Well done **Nigel Myers** of Bolton.

```
1 'Patterns
2 'Written by NIGEL MYERS
3 'Amstrad Action November 1988
4 'alter line 20..a=4 for striped lines
10 BORDER 5:INK 1,26:INK 0,0:c=25
20 MOVE x,0:DRAWR 0,400,1:MOVE 640-x,0:DRAWR 0,400,1:
   IF x<=320 THEN a=2
30 MOVE 0,y:DRAWR 640,0,0:MOVE 0,400-y:DRAWR 640,0,0:x=x+a
   :y=y+b
40 IF x>=640 THEN a=-2-INT(RND*14)
50éIF y>=400 THEN b=-2-INT(RND*14):INK 1,c:c=c-1:IF c<1 THEN
   c=20+RND*6
60 IF y<=200 THEN b=2
70 GOTO 20
```

Program Notes

Not much to this. Line 10 sets up the border and ink colours. Lines 20-30 perform the actual drawing of the pattern, and lines 40-60 perform some decision making on the pattern. Finally, line 70 loops to line 20 to draw the next bit of the pattern.

```
11720 PRINT #8,a$:a$=""
11730 NEXT
11740 RETURN
11750 REM * * * Poke Machine Code * * *
11760 DATA 21,00,C0,22,F9,A0,22,FB,3B9
11770 DATA A0,22,FD,A0,21,00,60,22,302
11780 DATA FF,A0,3E,08,32,05,A1,3E,2FB
11790 DATA 00,32,01,A1,3E,18,32,03,15F
11800 DATA A1,3E,50,32,04,A1,3A,03,243
11810 DATA A1,32,06,A1,2A,FD,A0,ED,42E
11820 DATA 5B,FF,A0,3A,04,A1,4F,06,32E
11830 DATA 00,ED,B0,13,ED,53,FF,A0,48F
11840 DATA 2A,FB,A0,11,00,08,19,22,219
11850 DATA FB,A0,22,FD,A0,3A,05,A1,43A
11860 DATA 3D,28,07,21,05,A1,35,C3,22B
11870 DATA 2C,A0,3E,08,32,05,A1,2A,214
11880 DATA F9,A0,11,50,00,19,22,F9,32E
11890 DATA A0,22,FB,A0,22,FD,A0,3A,456
11900 DATA 06,A1,3D,28,07,21,06,A1,1DB
11910 DATA 35,C3,2C,A0,C9,21,00,C0,36E
11920 DATA 22,F9,A0,22,FB,A0,22,FD,497
11930 DATA A0,21,00,60,22,FF,A0,3E,320
11940 DATA 08,32,05,A1,3E,00,32,01,151
11950 DATA A1,3E,18,32,03,A1,3E,50,25B
11960 DATA 32,04,A1,3A,03,A1,32,06,1ED
11970 DATA A1,ED,5B,FD,A0,2A,FF,A0,54F
11980 DATA 3A,04,A1,4F,06,00,ED,B0,2D1
11990 DATA 23,22,FF,A0,2A,FB,A0,11,3BA
12000 DATA 00,08,19,22,FB,A0,22,FD,2FD
12010 DATA A0,3A,05,A1,3D,28,07,21,20D
12020 DATA 05,A1,35,C3,A9,A0,3E,08,32D
12030 DATA 32,05,A1,2A,F9,A0,11,50,2FC
12040 DATA 00,19,22,F9,A0,22,FB,A0,391
12050 DATA 22,FD,A0,3A,06,A1,3D,28,305
12060 DATA 07,21,06,A1,35,C3,A9,A0,310
12070 DATA C9,00,C0,00,C0,00,C0,00,309
12080 DATA 00,00,00,00,00,00,00,00,00
12090 IF PEEK(&A000)=&21 AND PEEK(&A07D)=&21 THEN RETURN
12100 RESTORE 11760:FOR x=&A000 TO &A100 STEP 8
12110 FOR t=0 TO 7:READ a$
12120 POKE x+t,VAL("&"+a$)
12130 sum=sum+VAL("&"+a$)
12140 NEXT t
12150 READ d$:IF sum<>VAL("&"+d$) THEN PRINT "Error":END
12160 sum=0:NEXT
12170 RESTORE:RETURN
12180 REM If of course you don't mind having the Venetian
   Blind Version -
12190 REM the typing is alot less. Just leave out lines
   11760-12170 and
12200 REM Type the following ones in. Then Edit line
   10160 to read;
12210 REM 10160 GOSUB 12220
12220 DATA 21,00,c0,11,ff,5f,01,00,40,ed,b0,c9,END
12230 DATA 11,00,c0,21,ff,5f,01,00,40,ed,b0,c9,END
12240 RESTORE 12220:t=&A000:WHILE a$<>"END":READ a$
12250 POKE t,VAL("&"+a$)
12260 t=t+1:WEND
12270 a$=""
12280 t=&A07D:WHILE a$<>"END":READ a$
12290 POKE t,VAL("&"+a$)
12300 t=t+1:WEND
12310 RESTORE:RETURN
```

Memkit

Mark Baldwin has hacked out a program to help out all you hackers in your hacking. It adds six new RSX's to Basic, and should help out when you're looking around memory, because it's much better than using **PEEK** and **POKE**.

These new commands consist of:

- **|MDUMP, address, lines, rom**

Dumps the contents of RAM or a ROM to the screen from the given **address**.

The **lines** parameter is the number of lines to dump and must be in the range 0-255. (0 is treated as 255.) The upper **rom** number can be included.

- **|MTYPE, address**

Similar to **|MDUMP**: prints memory contents in Ascii format. Press any key to stop the dump.

- **|MFILL, address, length, byte**

Fills the contents of memory from the given **address** with the **byte** value. The length must be from 0-65535.

- **|BMOVE, source, destination, length**

Moves a block of code. The **source** is the start address, the **destination** is the target address and the **length** is the size of the block in bytes.

- **|DOKE, address, integer**

Places a 16 bit integer value in the the given **address**. Can handle values from 0-65535, and pokes them in low byte first, then high byte.

- **|DEEK, address, @variable**

reads a 16 bit value into an **integer** variable from the **address**. Declare the variable before you use the command!

```
1 ' Memkit
2 ' Mark Baldwin
3 ' Amstrad Action November 1988
10 MEMORY &9FFF:add=&A000:FOR p=1 TO 20:sum=0
20 FOR x=1 TO 16:READ a$:byte=VAL("&"+a$):POKE add,byte
30 add=add+1:sum=sum+byte:NEXT:READ a$
40 IF sum<>VAL("&"+a$) THEN PRINT"ERROR in line";50+p*10:END
50 NEXT:CALL &A000:PRINT"Commands installed":NEW
60 DATA 21,3B,A1,01,09,A0,C3,D1,BC,1D,A0,C3,51,A0,C3,FD,828
70 DATA A0,C3,DD,A0,C3,CB,A0,C3,EC,A0,C3,3A,A0,4D,44,55,9E0
80 DATA 4D,D0,4D,46,49,4C,CC,44,4F,4B,C5,44,45,45,CB,42,68F
90 DATA 4D,4F,56,C5,4D,54,59,50,C5,00,3D,C2,1D,A1,3E,42,603
100 DATA CD,1E,BB,C0,1A,FE,20,30,02,3E,2E,CD,5A,BB,13,18,649
110 DATA ED,FE,02,28,0F,FE,03,C2,1D,A1,DD,4E,00,CD,0F,B9,765
120 DATA DD,23,DD,23,DD,46,00,DD,5E,02,DD,56,03,3E,42,CD,6E3
130 DATA 1E,BB,20,3A,7A,CD,B4,A0,7B,CD,B4,A0,D5,48,06,08,795
140 DATA 3E,20,CD,5A,BB,1A,CD,B4,A0,13,10,F4,3E,20,CD,5A,717
150 DATA BB,D1,06,08,1A,FE,20,30,02,3E,2E,CD,5A,BB,13,10,575
160 DATA F3,3E,0D,CD,5A,BB,3E,0A,CD,5A,BB,41,10,BF,0E,00,668
170 DATA CD,0F,B9,C9,F5,07,07,07,07,CD,BD,A0,F1,E6,0F,F6,875
180 DATA 30,FE,3A,38,02,C6,07,CD,5A,BB,C9,FE,02,C2,1D,A1,79A
190 DATA DD,6E,02,DD,66,03,7E,12,23,13,7E,12,C9,FE,02,C2,674
200 DATA 1D,A1,DD,6E,02,DD,66,03,73,23,72,C9,FE,03,C2,1D,702
210 DATA A1,CD,10,A1,DD,4E,00,DD,46,01,ED,B0,C9,FE,03,C2,897
220 DATA 1D,A1,CD,10,A1,DD,46,00,70,23,1B,7A,B3,20,F9,C9,71C
230 DATA DD,6E,04,DD,66,05,DD,5E,02,DD,56,03,C9,21,2A,A1,6BF
240 DATA 06,11,7E,CD,5A,BB,23,10,F9,C9,50,61,72,61,6D,65,6C2
250 DATA 74,65,72,20,65,72,72,6F,72,0D,0A,00,00,00,00,00,3AC
```

Program Notes

This is a standard RSX loader. Line 10 reserves memory and then starts a looping procedure. Lines 20-50 continue this loop, with line 40 checking each line against the checksum at the end. Line 50 calls the machine code and clears the machine using NEW. The machine code DATA statements run from 60-250.

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● reviewed *AA30*



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Minerva Systems ☎ 0392 37756
£29.95 disk only ● reviewed *AA6*

Very good mathematical and string operations make this a database to watch for. Random disk accessing gives speed combined with power – and you can opt for a 40 or 80 column screen. Can be a little unresponsive to keys.

Ultrabase

Beebugsoft ☎ 0727 40303
£14.95 tape, £17.95 disk
● reviewed *AA6*

Keeps all data in memory, giving fast search and sort options but reduced capacity. Record format is fixed, making entry a little tiresome. Excellent price for a database, though, and featuring 'fuzzy logic' search option.

Word processors

Brunword 6128

Brunning Software ☎ 0245 252854
£16.50 tape, £25 disk ● reviewed *AA24*

40 or 80 column mode; in-built spell checker loaded into extra memory. Can be used by expanded 128K machines. Superscript and subscript effects appear on-screen.

Some on-screen operations such as centering and cursor movement can be a little slow. And files cannot be loaded into other word-processors.

NewWord

Newstar ☎ 0277 229509
£69.95 CPM+ ● reviewed *AA7*

Similar to Wordstar in many respects, and the two can swap documents. It is so big that two disk drives are needed to make the most of it. Again the manual is huge. One of the more desirable features (and there are an awful lot of those) is the ability of the program to display printer font styles on screen. So you can tell just where you have left them on accidentally.

On the other side of the coin, this is just about the most expensive word-processor for the Amstrad. Packed with features, it runs at the same rather sluggish speed as Wordstar.

Pendown

Logotron, £19.50 disk only
● reviewed AA18

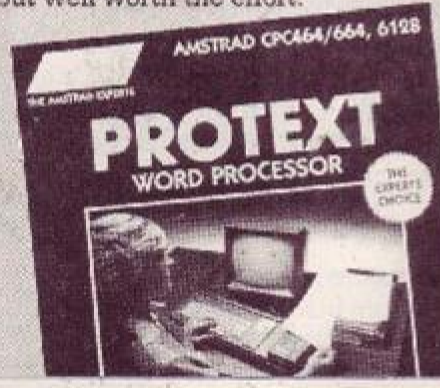
Pendown offers a complete tutorial in the theory and practice of the subject. It is a very open system, owing a lot to expensive DTP packages. Generally more people learn about the subject by means of *Tasword:* but *Pendown* is a lot more fun. Built into the product are different fonts to print with. You can't see them on screen but they make the end result much better. Even so, *Pendown* lacks many features, and one day you're going to want to move up.

Protext

Arnor ☎ 0733 239011
£19.95 tape, £26.95 disk, £39.95 ROM
● reviewed AA3

One of the first word-processors written especially for the Amstrad. Protext is lightning fast at all tasks involving the screen. True merging from separate files and disks to the cursor position is very easy, and the program supports standard CPC RSX's like DISC, TAPE, CAT etc.

Having software on ROM available at the touch of a key is excellent. Bad points: maximum file space is limited to machine memory – about 22K on disk and 38K for the ROM version. And a little daunting to get to grips with; but well worth the effort.



Pyraword

Discovery ☎ 0742 753423
£14.95 tape, £17.95 disk
● reviewed *AA18*

This program is similar in use to Pyradev, also from Discovery. When starting up it loads a profile of inks, printer codes and the character set. Word counting, changing disk drives etc – the housekeeping tasks of any program – are handily located. The program uses the extra memory of 128K machines for spooling printed documents and storing text.

Unfortunately true merging of files is not possible, and the control keys are a little strange at first. The margins cannot be set further apart than 80 columns, although placing a printer control character at the right hand side will allow wider documents to be printed.

Tasword

Tasman Software ☎ 0532 4388301
464, 464D, 6128, £19.95 tape, £24.95 disk
● reviewed *AA1*

A veritable herd of different releases. 464 is the tape based version, exactly the same as Amsword. 464D has a few enhancements for a disk drive. 6128 makes full use of a 6128's extra memory. The latter pair include a mailmerge facility as standard. If you are new to word-processing then this is worth a look. It is very easy to get to grips with and comprehensive help screens are available when needed.

Many people never find a need to change from *Tasword*. But the screen operations are fairly slow, and reformatting text is done one word at a time. If you want speed, look elsewhere.

Wordstar

Micropro/Cumana ☎ 0483 571666
£49.95 disk only (CPM) ● reviewed *AA1*

'*Pocket Wordstar*' is what this really is. But anyone who has seen an incarnation of the real thing on a CPC can tell you it's a dinosaur. Be glad the faster *Pocket* version is available. One good feature: files can be as big as the space available.

A fully professional program, *Wordstar* has a manual bigger than some printers and a layout reminiscent of mission control. If you want a function, it is in there... somewhere. Not fast.

Mini Office II

Database Software ☎ 0625 879940
£14.95 tape, £19.95 disk ● reviewed *AA6*

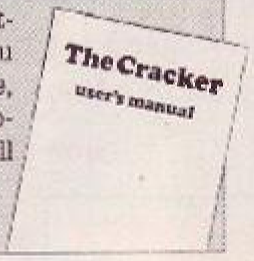
If you don't need full specification *Mini Office II* is the one to buy. For what is a remarkably low price you get a word-processor, database and a spreadsheet, plus other goodies such as comms software. Packaging and documentation good, and programs work in a menu environment. Worth considering if you're short of pennies (and who isn't?).

Spreadsheets

Cracker

Newstar Software ☎ 0277 229509
£49.95 disk CPM+ ● reviewed *AA9*

Spreadsheets must be created from scratch. Documentation well written; command sequences are soon learned. Mathematical functions very well catered for, and include random numbers. Files limited to 17K long – you soon run out of space, and formulae programming is not well implemented.



Mastercalc 128

Campbell Systems ☎ 0378 77762
£33 disk, 128K machines
● reviewed *AA4*

Can display two different parts of a spreadsheet at the same time. Includes notepad and calculator. Easy to use, but the mathematical formulae can only consist of the four basic arithmetic options. It slows down as more data is entered.

Matrix

Audiogenic Software ☎ 0734 303663
£34.95 disk ● reviewed *AA18*

Uses disk to store data – hence good capacity but poor speed. Graphic options on *Matrix* shames other spreadsheets. On screen prompts are rare, making it hard going at first. Calculating power good.

Supercalc 2

Amsoft/Sorcim ☎ 0277 230222
£49.95 CPM+ ● reviewed AA4

Originally this program cost £200, but was soon cut. Documentation is first class. Calculations can be determinative, – they will be performed on whether or not a cell's contents match a given value. Help prompts plentiful if needed and arithmetic functions excellent.

AA Buyers Guide

Part two:

serious reviews 25-37

Key: Column 1, product; 2, producer; 3, £price (tape); 4, £price (disk); 5, £price (other – ROM, etc.); and 6, *AA* issue reviewed.

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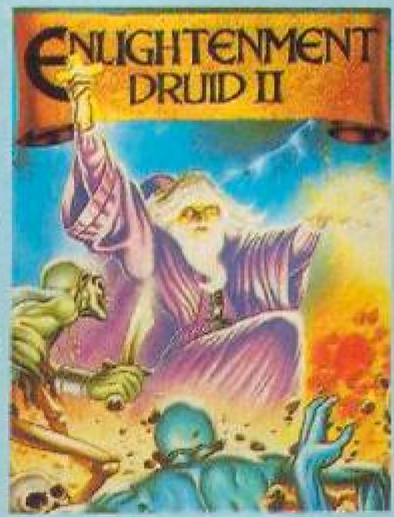
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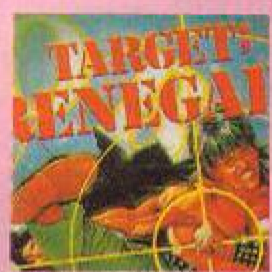
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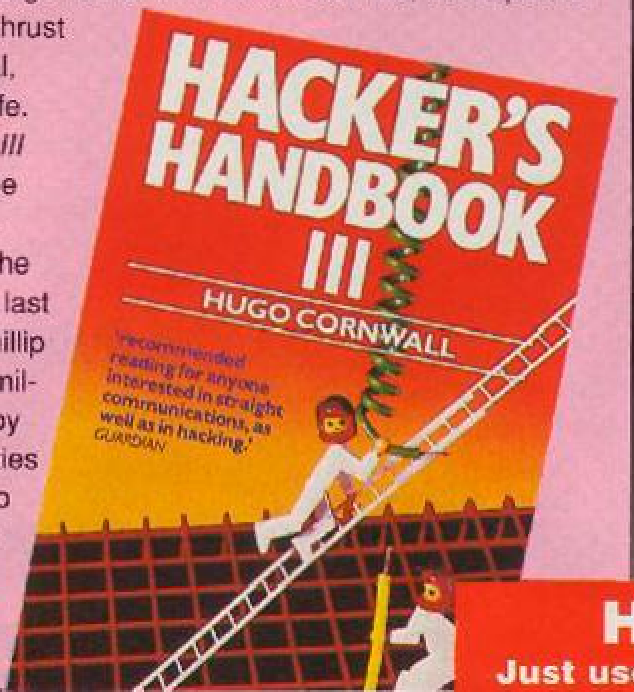
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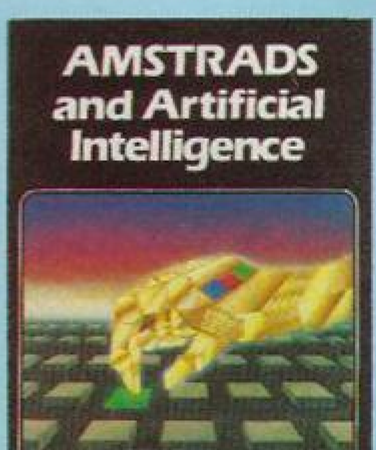
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Issues 8 and 16 may be of particular interest, as both include free cassettes packed with good software. Two series also went down very well. Andy Wilton's programming course in Basic for absolute beginners ran from issues 8-17, while a series of articles on the CP/M operating system ran from 10-17.

All issues contain numerous game reviews, Type-Ins and Pokes, all making up the best in Amstrad Action past and present.

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